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WHITE PAPER - A STUDY OF THE MANEUVER BATTALION RECONNAISSANCE OR SCOUT PLATOON

MAJ(P) CRAIG S. HARJU, SR.
U.S. ARMY ARMOR SCHOOL
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This report covers the history of the armor and mechanized infantry battalion reconnaissance (later scout) platoons from 1942 to 1989. It examines their organization, equipment, and employment doctrine. Specific focus is given to the doctrinal evolution of reconnaissance, surveillance, counterreconnaissance, and security missions; materiel evolution of scout vehicles, STANO, communications, and weapons systems; and organizational fluctuation over the past 47 years. The report concludes with a composite of what the author believes are the historical missions of the reconnaissance/scout platoon, and a recommended TO&E for a Reconnaissance and Surveillance Platoon in the 1990s.

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WHITE PAPER - A STUDY OF
THE MANEUVER BATTALION
RECONNAISSANCE OR SCOUT
PLATOON

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SECTION I

INTRODUCTION

In November 1942, the reconnaissance platoon of our tank and armored infantry battalions went to war. Since its introduction into combat in North Africa, the reconnaissance platoon (or its modern descendant, the scout platoon) has recorded just under five decades of history. Yet, in that relatively short period, it has suffered the turmoil of thirteen major changes to its Table of Organization and Equipment (TO&E). With the consistency of a metronome, the primary emphasis of its employment in our doctrine has swayed from stealthful recon to security and back; its organization evolving from all-scout to cavalry surrogate and back.

Perhaps the most misunderstood and misutilized element of armor and mechanized battalions, the reconnaissance or scout platoon is the focus of this paper. I want to make that clear, because there has been so much written about cavalry and armor, I believed it was time to take a hard look at maneuver battalion scouts. HQs, TRADOC and the Armor Center are presently conducting similar studies. Hopefully some positive change may come of all of these efforts.

I believe the problems relating to the scout platoon fall under one of four major issues:

1) <u>There has been no consistent front-end analysis of the reconnaissance or scout platoon's role relative to its parent battalion's echelon</u>. The recon/scout platoon is a component of the heavy combined-arms task force. It is not cavalry, nor must it necessarily respond to the identical and peculiar METT requirements faced by divisional cavalry squadrons or the corps armored cavalry regiment. The maneuver battalion scout platoon must be capable of meeting the requirements of the maneuver battalion task force. Without a front end analysis to serve as a blueprint or guide, the scouts have fallen prey to every imaginable "fly-by-night" combat developer, cavalry quasi-expert, and lessons (re)-learned.

2) <u>There has been, over time, a lack of "clear" doctrinal employment guidance</u>. Our WWII field manuals rarely mentioned its use. Subsequent manuals have either followed suit, or embraced one of two competing doctrinal philosophies. On one extreme, the scout platoon was seen as a lightly mounted and armed force which primarily conducted stealthful, passive reconnaissance or surveillance. On the other extreme, it has appeared as a general purpose force, fully capable of reconnaissance, security, and economy of force combat missions for the battalion task force. Regardless, the number of mission requirements piled up over the decades, yet the doctrine or tactics supporting them has often been wanting.

3) Reconnaissance or scout platoon tables of organization and equipment have been based on expediency. Scout platoons have had various combinations of jeeps, light tanks, APCs, IFVs, CFVs, heavy/medium & light antiarmor weapons, light & medium mortars and all calibers of crew-served and individual automatic weapons. Only with the M114 Armored Command and Reconnaissance Vehicle did the scouts "enjoy" a dedicated piece of equipment, yet even that was a failure. Whether their equipment was "shared in common" with the cavalry or mechanized infantry, it has generally provided a less than satisfactory solution. More important, the scouts have endured extreme fluctuations in personnel and equipment end strength. While the traditional mechanized infantry platoon has evolved from five halftracks to four APC/IFV's with about 45-35 men, and the tank platoon from five to four tanks, our scout TO&Es have varied from fifteen to six vehicles and from 50 to as few as 21 men. These changes occured without a significant deviation in the mission requirements for the parent battalion.

4) Finally, the maneuver battalion scout platoon has been misused by commanders and staff for generations. It has variously served as the "elite" of the battalion, a tripwire in front of the task force (shot at by both sides), the TOC guard, an in-house OPFOR, Tank Table XII scorers, traffic control point guides (TCPs), but has usually responsed best to that time honored frago. . . "go screen a flank"!

I have examined the complete history of the scout platoon from its WWII origins to present, thus eliminating the irritating tendency on the part of many action officers to just consider today's and yesterday's problems, when proposing a solution for tomorrow. The oft used quote - "Those who do not heed history, are condemned to repeat it! - is applicable here. By studying four a half decades of scout platoon history, I witnessed the results of major doctrinal changes in the Army. I also saw the influence of military conflicts on the scout platoon, yet with the exception of Korea (not exactly a mechanized war) and Vietnam (again a unique situation), the scout platoon has not been to war in a manner consistent with its primary doctrinal intent since World War II.

From the Atomic Battlefield of the late 1950s, through the Active Defense and battle calculus of the late 1970s, to AirLand Battle and the NTC-spurred "Renaissance of Reconnaissance", the scout platoon has endured. This paper tells their story and proposes some ideas for a scout platoon in the 1990s and beyond.

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BATTALION RECONNAISSANCE PLATOON - WORLD WAR II

By late 1942, the Armored Force had reached a plateau in its evolution which had witnessed accelerated growth in the late 30s and early 40s. Field Manual 17-33, The Armored Battalion, Light and Medium, dated 18 September 1942, covered operations of three types of battalions: light, medium, and GHQ. While the light and medium armored battalions were located in the fledgling armored divisions, the GHQ battalions were separate, and assigned on an "as needed" basis to infantry divisions or used on special missions. Each of these battalions had three maneuver tank companies and a headquarters and headquarters company, which included an assault gun platoon, a mortar platoon, and a reconnaissance platoon.

This first, battalion reconnaissance platoon had a halftrack, four jeeps, and two motorcycles with an officer and 21 scouts (Fig 1). It differed considerably from the organization of the platoons of the regimental reconnaissance company, the divisional reconnaissance battalion, or corps mechanized cavalry groups or squadrons. At that time, their platoons had a common organization of four armored cars, four jeeps (two w/60mm mortars) and an assault gun mounted on a halftrack, with two officers and 42 scouts authorized.

The maneuver battalion reconnaissance platoon had a very limited amount of doctrinal guidance in FM 17-33. The manual mentioned or referred to the platoon on no more than a dozen scattered pages, but even then a few cogent points were made. Its responsibilities included reconnaissance during marches out to about 1-7 miles in front of the point/advance guard, to include checking laterals. It was not to serve as the point! It could conduct "close reconnaissance" of rallying points and assembly areas to aid the battalion commander in "battle reconnaissance" in the projected area of employment. During combat, it followed the reserve company and performed either reconnaissance to the flanks or liaison with adjacent units. This was the essence of the intended usage of the battalion reconnaissance platoon, but was doctrine not based on lessons learned in combat!

FM 17-10 Armored Force Tactics and Techniques, dated 7 March 1942, provided additional doctrinal guidance on reconnaissance tactics and techniques. It classified reconnaissance into three distinct categories.

The first, distant reconnaissance, was a function of the division reconnaissance battalion and aviation. It sought to locate advanced enemy elements and maintain contact with them.

Close reconnaissance was the mission of the regimental recon company and included observation or combat, if required, to obtain detailed information on the location, strength, composition, and movements of the enemy, as well as information on the terrain.

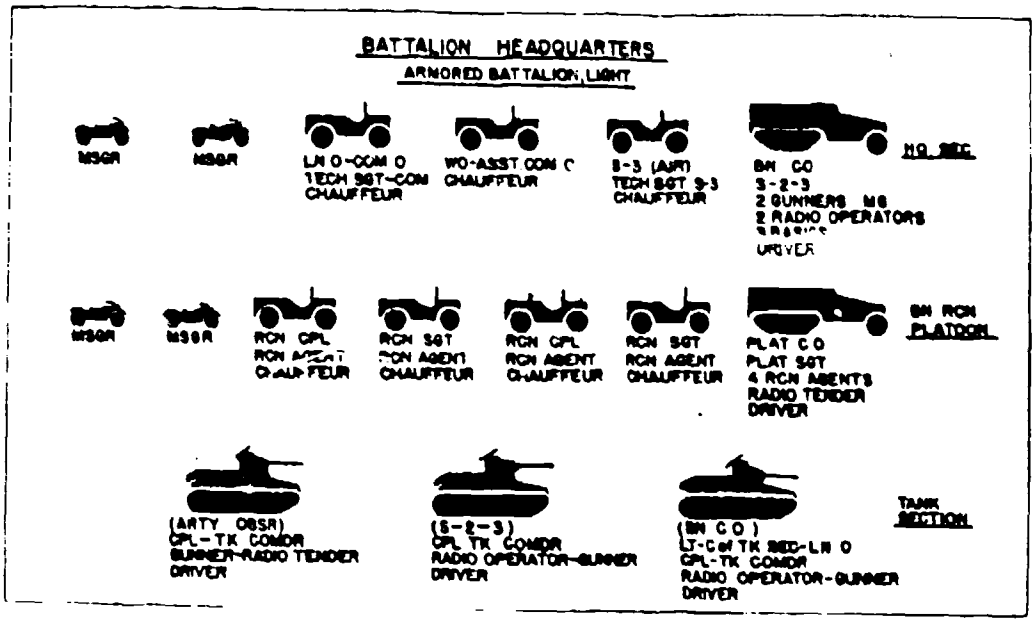


FIGURE 1. The 1942 version of the Battalion Reconnaissance Platoon.

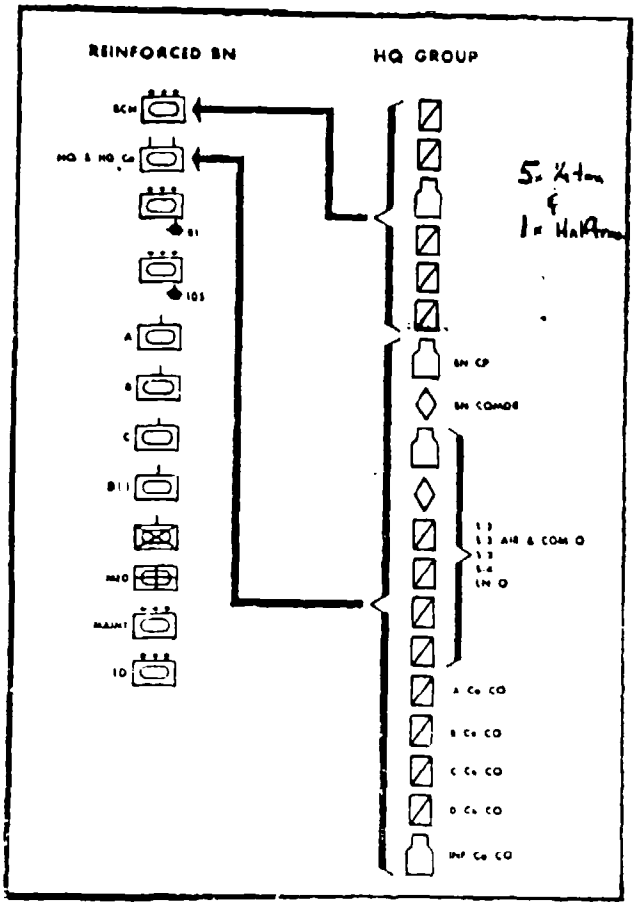
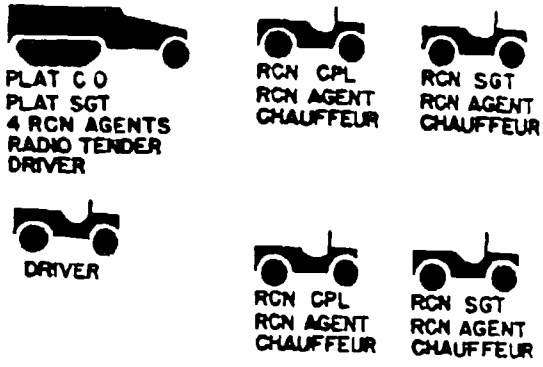


FIGURE 2. The 1944 version of the Battalion Reconnaissance Platoon. It was common to both the Tank and Armored Infantry Battalions.



Battle reconnaissance was a function of all echelons, being a continuous process of observation of enemy forces in contact or whose contact was deemed imminent. The maneuver battalion recon platoon performed the latter in concert with the battalion command group. The manual emphasized stealth, but also stressed aggressiveness in the performance of the recon to the point of launching an attack to secure essential information.

A key point was that much of this manual was devoted to regimental or divisional armored reconnaissance units which were equipped to fight if necessary. Only Chapter 3, "Scouting and Patrolling - Mounted", provided fundamentals truly applicable to the tank battalion reconnaissance platoon worth mentioning:

> Reconnaissance scouts are not expected to engage in combat except in self-protection...The vulnerability of motorcycle scouts to small arms fire usually renders it impracticable to employ them as mounted ground scouts on the battlefield...Mounted scouts must be thoroughly grounded in the fundamentals of dismounted scouting; they do most of their reconnoitering dismounted. 1

> The most effective reconnaissance platoon is the one that sees without being seen! 2

The first version of the maneuver battalion reconnaissance platoon saw limited action in North Africa, and then gave way in a major reorganization of the Armored Force. In September 1943, a new "light" version of the armored division appeared.

Instead of two armored regiments, each with two medium and one light tank battalions, the new division mustered three revised medium battalions and no regimental headquarters. Each of the battalions (TO&E 17-25) kept its three medium tank companies, but added a light tank company (Co D).

The armored infantry regimental headquarters disappeared, the three armored infantry battalions increasing in size and becoming separate units. Each retained its identical version of the reconnaissance platoon.

Finally, three combat command headquarters were adopted as tactical controlling headquarters for armored task forces, between the division and battalion echelons.

Concurrently, the reconnaissance platoon turned in its motorcycles and drew an additional jeep (fig 2). The two scout sections now had two jeeps and six scouts each, while the platoon headquarters had a halftrack, jeep, and nine scouts. The jeeps had proved to be very adept at cross-country movement, far superior to the motorcycle-sidecar combinations of the Axis. The motorcycle scout was too limited in his contribution to the overall recon effort, and too vulnerable to enemy fire or accidents. This new reconnaissance platoon landed on the Normandy beaches and scouted virtually unchanged until Germany was defeated in 1945.

The Armored Force published two new manuals late in 1944. Each provided an excellent discussion of doctrinal expectations of the recon platoon based on lessons learned in North Africa, Sicily, Italy, and during the Normandy Campaign.

FM 17-42 Armored Infantry Battalion, Nov 1944, continued to emphasize that the principle mission of the reconnaissance platoon was to obtain information. The platoon was to avoid engagements while reconnoitering roads, trails, or cross-country terrain. Use of dismounted scouts was stressed. The platoon could be reinforced by organic or attached units when the need arose. While the platoon still provided road guides, when the main body was committed, the platoon established OPs, performed continuous battle reconnaissance, maintained liaison between adjacent units, or supplemented flank security organizations. In the defense, the platoon conducted reconnaissance, counterreconnaissance, defense, delay, or flank security for the battalion but only through reconnaissance missions.

FM 17-33 Tank Battalion, dated a month later, differed slightly. While the armored infantry battalion had only three rifle companies, TO&E 17-25 provided the tank battalion with a fourth maneuver company of light tanks. This company's principle missions included reconnaissance and security, to screen the advance, to protect (guard) the flanks, and to feel out and develop weak spots for attack by the remainder of the battalion. The battalion S-2 was charged with supervising the recon platoon, not the S-3, but then reconnaissance was its exclusive mission.

This platoon could recon a single route and its laterals. The platoon leader had the equivalent of a squad in his vehicle for dismounted tasks and was expected personally to lead dismounted patrols of importance. Due to the platoon's small size, FM 17-33 mentions reinforcing it with jeeps from the tank companies if required, but the TO&Es of that era included extra jeeps and soldiers not found in our tank companies today.

This platoon could man three OPs for extended periods, provided the headquarters element covered one. The platoon could provide "security through observation" in the form of either OPs or mobile patrols, but could not provide counterreconnaissance without reinforcement. The scouts provided guides and checked the flanks when the battalion marched as an interior force such as follow & support. If enemy contact was expected, a "covering detachment" of light tanks and armored infantry was employed.

This force had the option of employing reconnaissance by fire, a technique employed by armored reconnaissance platoons at higher echelons. While combat patrols were best performed by light or medium tanks, the battalion's covering detachment could, but not necessarily, require the inclusion of the reconnaissance platoon:

> Reconnaissance patrols, which specialize in the collection of information through stealthy scouting, avoid combat except in self-defense or when essential to gain the required information. This mission is performed normally by the tank battalion reconnaissance platoon. 3

Note that a second qualifier on when to engage in combat had entered the doctrine for the maneuver battalion reconnaissance platoon.

The information usually sought by either recon or combat patrols centered on locating antitank guns, minefields, and reserves (especially armored forces). A tank might expose itself to draw fire before breaking off the reconnaissance. By day, probing was done by tanks or dismounted personnel, whereas by night only dismounted forces were employed.

The reconnaissance platoon did not enjoy a wealth of "how to" information in either of the late war field manuals. With its small size and lack of combat power, the platoon had no prescribed battle drills. Most of the basic tactics and techniques were left to the leaders to figure out for themselves.

As a footnote to history, another type of armored reconnaissance platoon existed during the war. FM 18-22 Tank Destroyer Reconnaissance Platoon, dated 27 Nov 1944, prescribed the tactics and techniques to be used by this unit, unique to tank destroyer battalions. Under T/O&E 18-28 or 18-36, its 22 men rode on five jeeps (four with pedestal machineguns) and two M-8 armored cars. The manual shows seven basic formations, each built around an armored car with either the PL or PSG, a pair of machinegun jeeps, and the remaining jeep used as a messenger vehicle. Its equipment and use were more closely akin to the cavalry reconnaissance platoons. Although similar, but smaller than its mechanized cavalry counterparts, it quickly faded into obscurity with the elimiation of the tank destroyer force after the war.

RECONNAISSANCE PLATOONS 1942 & 1944

THREAT - Both versions of the recon platoon faced primarily an infantry threat. Even though Germany had considerable strength in its panzer and panzergrenadier divisions, its frontline forces, or more precisely, its security forces tended to be dismounted infantry. The reconnaissance platoon might encounter squad-size OPs, patrols, or as much as a platoon-size force manning a roadblock. The primary concern, I suspect, was from automatic weapons, mines, and mortar fire. If the scouts probed a position, they might face an antitank gun or manportable antitarmor weapons. Occasionally they might meet an armored car, halftrack, tank destroyer, assault gun or tank, but the typical threat composed lighter forces.

TACTICAL FLEXIBILITY - The late war platoon had two scout sections, each of two jeeps with a total of six scouts. The headquarters section could be employed as a third scout section, and had sufficient personnel to provide a small squad for dismounted action. It could check one route with laterals to either side or maintain three OPs for extended periods. It had no counterreconnaissance capability. No battle drills were prescribed as no battle was intended.

COMMAND, CONTROL & COMMUNICATIONS - The earlier version of the platoon had both the platoon leader and platoon sergeant in the same halftrack. The later version provided greater flexibility in that the PL and PSG had separate vehicles. The platoon had only three, short-range FM radios. The platoon's halftrack mounted a SRC-508 while the scout sections each had a single SRC-510 mounted in one of the jeeps. The motorcycle scouts had been available for messenger service, yet they were assigned to the two scout sections, not to the platoon headquarters. With the elimination of the motorcycle, the PSG's jeep could be pressed into motor messenger service if required. An important difference between the battalion reconnaissance platoon and higher echelon units is that armored reconnaissance platoons had radios capable of operating either in the voice mode (FM) or the CW mode with a range of 70 miles. The maneuver battalion reconnaissance platoon did not have this luxury, but given the time distance relationships it usually maintained, this was not a requirement.

STANO CAPABILITY - The platoon had binoculars and observation scopes which were usually employed by dismounted scouts. No other specialized optics were provided. The dismounted scout was the STANO asset!

MOBILITY - The jeeps provided excellent mobility on primary and secondary roads, with acceptable cross-country performance given the capabilities of the medium and light tanks they supported. The halftrack had similar road speeds, but superior cross-country performance. None of the vehicles were amphibious, nor capable of deep wading, but the small size and light weight of the jeep allowed it to cross many small bridges such as those used by farmers' carts. In fact, the field manuals of the time show how to set up a pulley system supported by A-frames to move a jeep over a water obstacle or dry gap using a single strand of cable or heavy rope.

CONCEALABILITY & STEALTH - Due to the predominance of jeeps in the platoon, true movement by stealth was possible. The jeep provided the scouts with a low, agile, quiet platform from which they could easily dismount. While the jeep could neither generate nor project smoke for self-protection, the crew frequently carried smoke grenades. By comparison, the halftrack was large and noisy, usually following the jeep-mounted scouts when stealth was required.

WEAPONS & LETHALITY - Both versions of the TO&E authorized a single .50 cal heavy machinegun on the platoon leader's halftrack as its largest and most lethal automatic weapon. The remainder of the platoon carried a combination of rifles, carbines, submachineguns and pistols. As the war progressed, scout platoons tended to "adopt" weapons found on the battlefield, so the average platoon probably possessed additional machineguns, BARs, and perhaps a 2.36" bazooka or a 60mm mortar. These additions were intended to increase the platoon's chances of survival if combat occured, not allow it to pick fights. By TO&E, their antimaterial and antiarmor capability was nil. They could not conduct recon by indirect fire like their division and corps recon platoon counterparts (which had organic 60mm/81mm mortars) unless they were within range of the battalion's mortar platoon or supporting DS artillery (remember the 1-7 mile doctrinal gap between the recon platoon and the battalion advance guard). In line with these shortcomings, recon by fire was doctrinally discouraged.

SURVIVABILITY - One of the greatest deficiencies of this TO&E, the jeep mounted scouts were exposed to everything from small arms fire to mortars, artillery and bird droppings. The halftrack, while marginally armored against small arms fire, was vulnerable to any antitarmor weapon, indirect fire, mines, and even hand grenades.

LOGISTICS - Both types of vehicles were simple to operate, had high reliability, and were easy to resupply. The halftrack offered the possibility of carrying additional fuel for the jeeps to extend their range or radius of action. Also, the halftrack had a winch which offered the capability of self recovery and rapid recovery of mired jeeps.

ERRATA - The reconnaissance platoons in 1944-45 were one of fourteen maneuver platoons organic to the tank battalion. Its 21 soldiers represented a mere 3% of the 620 aggregate strength of the battalion.

PERCEIVED OR ACTUAL SHORTCOMINGS & DEFICIENCIES

1) Inadequate survivability, especially the jeeps.
2) Inadequate communications.
3) Insufficient capability (too small).
4) Inadequate overwatch & support capability within the scout sections (squads).
5) Unable to conduct combat reconnaissance without attachments.
6) No organic counterreconnaissance capability.
7) Lacked firepower necessary to develop the situation.
8) Insufficient dismount capability (actually a "cavalry" problem of the era, it was not a significant problem in the maneuver battalion recon platoon).

BATTALION RECONNAISSANCE PLATOON - POST WWII CAVALRY SURROGATE

The immediate post-war period found a vast, formidable military organization rapidly demobilizing while maintaining occupation forces in Germany and Japan. The U.S. Army tried to capture the most important lessons learned from the war to critique and correct its existing doctrine, organization, training, and materiel, thus charting the way for the future. I reviewed the results of five major reports issues in the late 40s or early 50s. These provided the essence of how the third iteration of the recon platoon TO&E came to be a more general purpose, reconnaissance and security force.

The War Department Equipment Board (WDEBR) convened on 1 November 1945, with General Joseph W. Stilwell presiding, and issued the first report of importance. An early forefather of combat development efforts, this report emphasized recommendations for materiel, reviewing weapons and systems from all of the branches, to include those in the Army Air Force. Within the scope of their charter, the board covered cavalry materiel, but also included critical observations of an organizational or doctrinal vein:

> Whether performed by Cavalry or by organic reconnaissance units, vehicular ground reconnaissance will remain a requirement, and such units <u>should utilize the equipment prescribed for mechanized Cavalry</u>. The armored car lacks the mobility necessary for use by the most advanced patrol those elements. Development should be terminated. The supporting backbone of reconnaissance units should be the light tank. A lightly armored 1/4-ton type vehicle should be provided for the most advanced patrol elements. 4

The combat experience of mechanized cavalry reconnaissance units, in addition to their prescribed role of reconnaissance, saw them called upon frequently to perform offensive and defensive combat. The WDEBR recommended combat vehicles including a lightly armored jeep, a light tank (the M24 Chaffee with further development to provide silent overall operation, silent tracks, and extended cruising range), a full-tracked armored personnel carrier, mortar carrier, and command vehicle, as well as a 105mm armored assault gun. A few ancillary recommendations included a remote control decoy device to draw hostile fire, television, facsimile, ground surveillance radar, a rangefinder for dismounted use, and an odograph for mounted and dismounted use.

The key point is that for the first time in print, the organization and equipment recommended for the maneuver battalion reconnaissance platoons and higher echelon division or corps mechanized cavalry platoons were to be interchangeable.

The General Board, United States Forces, European Theater (USFET) issued the next three reports. Appearing first, on 20 December 1946, was Report Number 48 on the Organization, Equipment, and Tactical Employment of the Armored Division. This report included a survey of 88 junior combat leaders from second lieutenant through lieutenant colonel who had been assigned to an armored division.

Question #6 posed - What recon unit should there be in the:

. . . Armored Inf Bn?	Jeeps & Armored Cars	14 responses
	Jeeps & Light Tanks	12 responses
	Jeeps & Halftracks	13 responses
	No response recorded	49 responses
. . . Tank Battalion?	Jeeps & Armored Cars	12 responses
	Jeeps & Light Tanks	21 responses
	No response recorded	55 responses 5

The report concluded with the recommendation that each tank and armored infantry battalion have an identical "Battalion Reconnaissance and Security Platoon" (fig 3). It was a virtual carbon copy of the armored reconnaissance platoon of the cavalry.

Report Number 50 on Separate Tank Battalions, issued the same day, gave only the minor reference to the reconnaissance platoon. In a section of the report, five officers in the grades of LTC and MAJ gave their widely differing opinions on both the reconnaissance and mortar platoons:

	RECONNAISSANCE PLATOON	MORTAR PLATOON
#1	Increase by 4 halftracks & 5 jeeps to have a total of four sections.	Delete it: substitute a cub plane section.
#2	Increase to three sections of three jeeps and an armd car each.	Equip it w/larger mortars.
#3	Have two platoons.	Eliminate it.
#4	Make it the same as the div recon troop.	Disband it.
#5	Replace the existing half-track with an armored car.	Increase it to six tubes. 6

The consensus was to increase the size of the reconnaissance platoon and improve its combat capability. Note, however, the report made no recommendation to include tank destroyers or medium tanks. Clearly these officers saw the reconnaissance platoon's role focused primarily on reconnaissance. If combat power of a greater magnitude was required, additional assets from the battalion task force could be attached or simply given the mission.

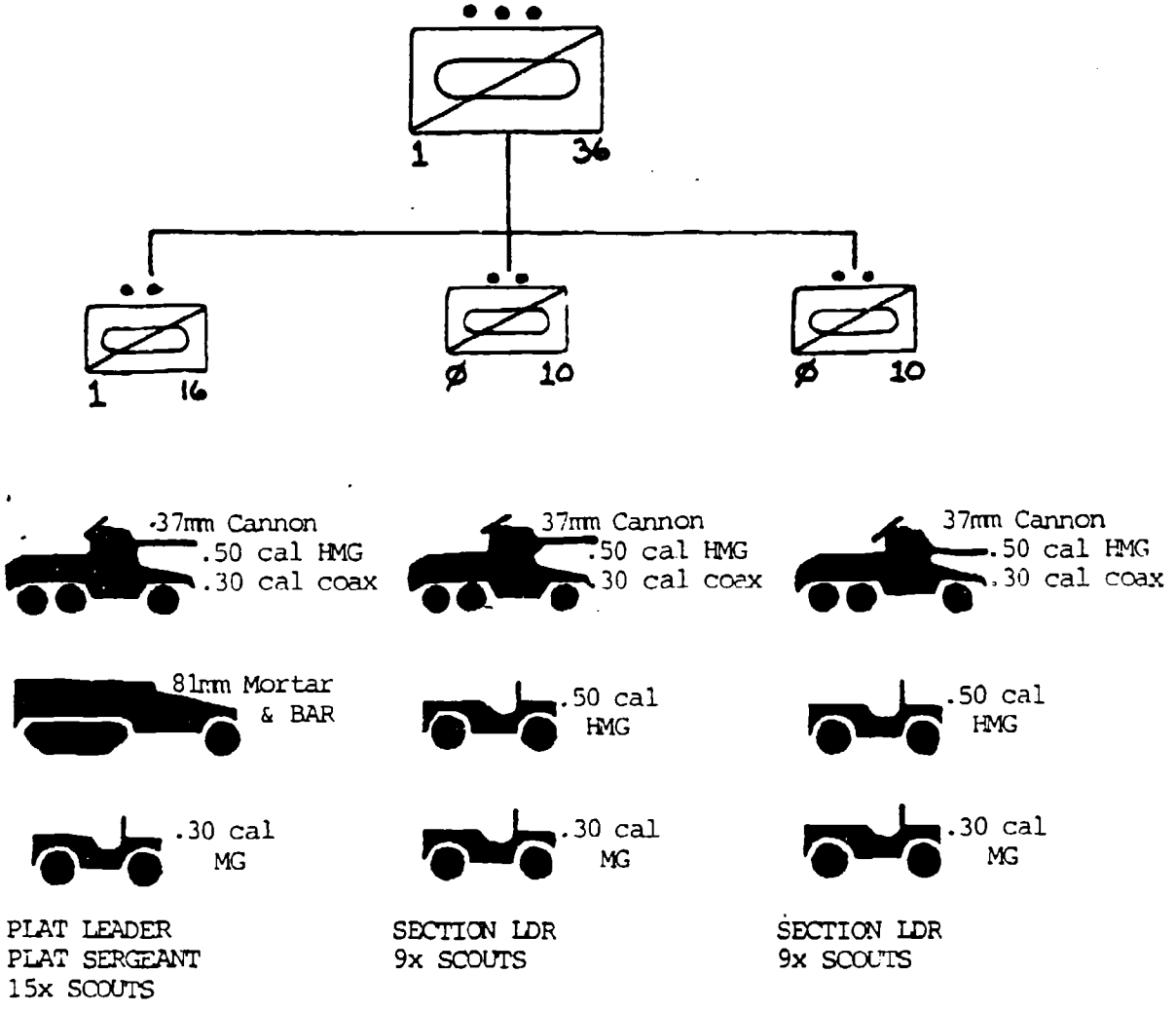


FIGURE 3. Recommended Reconnaissance/Cavalry Platoon
GB, USFET Report #49, Mechanized Cavalry Units

GB-USFET Report Number 49 was issued in February 1947. It covered the Tactics, Employment, Technique, Organization, and Equipment of Mechanized Cavalry Units. By far the most comprehensive in nature, its scope included the mechanized cavalry group (later armored cavalry regiment) of the corps or army, the mechanized cavalry reconnaissance squadron of the armored division (or the armored reconnaissance battalion of the older TO&Es in the 2nd & 3rd ADs), and last, the mechanized cavalry reconnaissance troop of the infantry division. Shown below is the most important information. It reflects the mission requirements by echelon fulfilled by their supporting cavalry.

		MISSION PERCENTAGES				
UNIT	(ECHELON)	RECON	SECURITY	OFFENSE	DEFENSE	SPECIAL
Group	(Corps/Army)	3%	25%	10%	33%	29%
Sqdrn	(Armd Div)	13%	24%	4%	11%	48%
Sep Troop	(Inf Div)	6%	50%	1%	4%	39%

Several conclusions can be drawn from this data. One is that pure reconnaissance was no longer the primary mission of cavalry at corps and division levels. Another is that cavalry fulfilled the needs and requirements of a corps with a far different mission profile than a squadron did for an armored division or a single troop did for a three-regiment, infantry division. Also, that at division and corps levels, security and economy of force combat had become the predominent requirements for cavalry units.

While this particular study has served as the historical basis for many literature searches on cavalry, it had nothing to do with maneuver battalion reconnaissance platoons! Instead, Reports #48 and #50 actually contribute far more to the study of maneuver battalion scouts.

The last report of the era was The Report of Army Field Forces - Advisory Panel on Armor issued in February 1949. Coming after the 1948 TO&E revisions, it focused on the doctrinal missions of the Armored Cavalry Regiment (Light) and the divisional reconnaissance squadrons or companies, and emphasized the need for firepower in the form of the M24 light tank.

The die was cast for a new platoon which would solve the lack of firepower, dismounted capability, communications, and robustness. Most important, it could handle the spectrum of tasks from reconnaissance through security to include economy of force combat missions.

The solution was a new reconnaissance platoon which became the smallest combined arms team the Army had ever established by TO&E. It provided a jeep for the platoon leader, retained a four-jeep scout section, added two M24 light tanks, and an armored infantry squad in an A.C, and finally included a single 81mm mortar squad carried in two jeeps with trailers (figs 4 a and b).

The post-war armored division also changed so that it now fielded three medium tank battalions, a heavy tank battalion, and four armored infantry battalions, all of which were organized in three combat commands. The maneuver battalion reconnaissance platoon was organized exactly the same as the reconnaissance platoons of the:

- Reconnaissance battalion, armored cavalry regiment (light)
- Reconnaissance battalion, armored division
- Reconnaissance company, infantry division
- Reconnaissance company, airborne division

In the medium tank battalion (T/O&E 17-25N, April 1948), the new reconnaissance platoon remained in a retitled Headquarters, Headquarters and Support Company (HHSC), but the mortar platoon had been eliminated. The battalion retained four maneuver companies, but D Company had medium instead of light tanks. This latter change had a direct impact on the reconnaissance platoon.

Field Manual 17-22, Reconnaissance Platoon and Reconnaissance Company, published in May 1950 became the single doctrinal source for all recon units. The basic mission statement proclaimed a significant change:

> The reconnaissance platoon and company provide security and perform reconnaissance or light combat for units to which they are assigned or attached. For successful accomplishment of these missions, . . . (all) are organized, equipped, and trained to attack, to defend, or to delay. 7

The importance of security and combat missions reversed the stance of early wartime doctrinal literature which had emphasized recon by stealth and combat only as a last resort of self-defense for the maneuver battalion recon platoon. As seen in the mission statement, security was the first (lead) mission, while reconnaissance and light combat (econ of force) were other primary missions. This position was believed to be correct for all recon units regardless of the echelon they served. Thus the doctinal METT norms faced by the corps cavalry reconnaissance platoons essentially equalled that of the maneuver battalion reconnaissance platoon.

FM 17-22 provided some other key changes in tactics, techniques and procedures. The scout section would normally lead the platoon, with jeeps mounting a machinegun preceding radio jeeps (neither had both). The light tanks led only if small arms fire was expected. The platoon conducted recon by fire, but no preferred methods were given. The platoon was expected to attack frequently in the execution of its mission, however the platoon leader had to be relatively certain of local success before deciding to attack. As many can attest, this is easier said than done.

Nine months earlier, the 1949 version of FM 17-33 Tank Battalion provided this mission statement for its reconnaissance platoon:

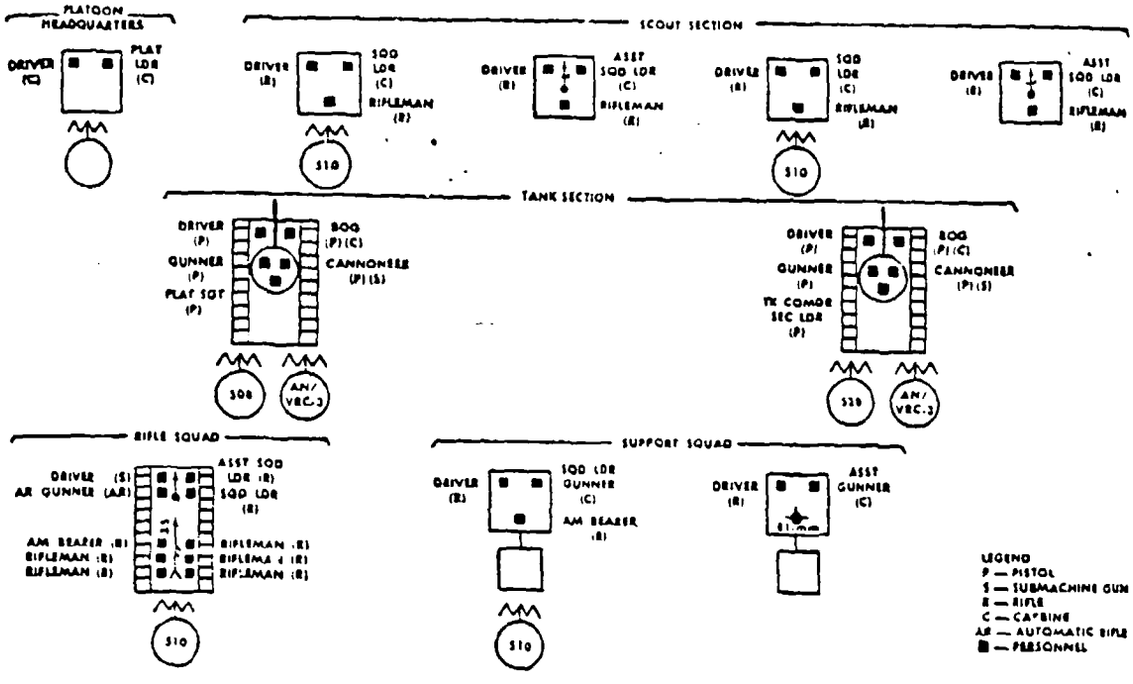


FIGURE 4A - The 1948 Version of the Battalion Reconnaissance Platoon. Note that each scout jeep carried either a radio or machinegun, but not both. Also note that each M24 Chaffee Light Tank carried a 5-man crew. The platoon leader's jeep was authorized only a driver, no second scout observer. The platoon sergeant served as a TC on a M24.

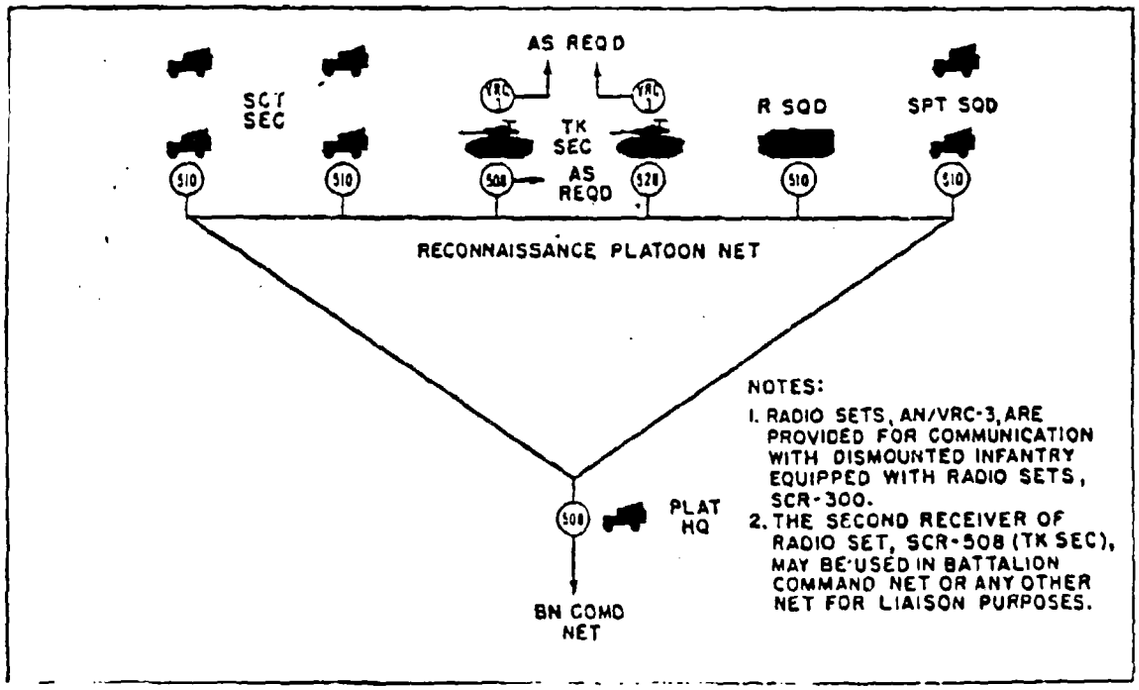


FIGURE 4B - Communications Laydown

> It may perform missions of security and reconnaissance to the front, flanks, and rear of the battalion. In the performance of these missions the platoon will normally operate within supporting range of the battalion. The platoon also performs necessary dismounted patrolling for the battalion. In addition to these missions, the reconnaissance platoon assists the battalion commander in the control of movements of the battalion, or elements thereof, by route reconnaissance, posting of markers, and reconnaissance of bivouac areas, assembly areas, and attack positions The platoon is organized to operate as a team. Its command and tactical units should be maintained, and it should be assigned one mission at a time. 8

The recon platoon now had the mission of flank guard on a single flank or to serve as the rear guard for the battalion. In fact, the manual specified that tank and armored infantry units would not normally be employed as flank guards. The advance guard was normally a reinforced tank company, however the recon platoon might serve as a covering force in front of the advance guard "to screen the main body and to develop the situation rapidly". Later in the manual, a statement of caution provided that if enemy contacts were frequent and combat with enemy units employing tanks or antitank guns was expected, it was not advisable to employ the recon platoon as a part of the advance guard or the covering force due to the lightness of its armor.

In a mobile defense scenario, the recon platoon gained and maintained contact with the enemy forces in the area, to ensure early information of enemy movement toward the defended area. It also might patrol, maintain contact with adjacent units, or establish observation and listening posts. The remaining tasks were many of those the WWII recon platoon had usually accomplished, except for the delaying action mission which was new.

Finally, FM 17-33 gave some specific guidance on the establishment of the battalion's security force in front of a sustained or positional defense. A combat outpost line (COPL) was normally established 800 to 2000 yards in front of the main line of resistance, far enough forward to deny the enemy close ground observation of the battle position. For a reinforced tank battalion, the combat outpost might consist of one of more reinforced tank platoons, but the <u>use of the reconnaissance platoon is omitted</u>.

The Korean War had no significant impact on armor organizations but minor changes did result from lessons learned (or relearned). A reorganization of armor battalions to TO&E 17-25R in 1952 returned the mortar platoon to the HHSC. The presence of a single 81mm mortar in the reconnaissance platoon became superfluous with the four 4.2" mortars organic to the battalion, but it remained until the next major reorganization.

The mortars returned primarily because tank organizations still required a very responsive means of providing illumination during combat actions at night. Mortars had also proved their worth in the mountains of Korea, given the unique trajectory of their projectiles.

I believe it is important to touch on two corollary topics. The first concerns the presence of light tanks in the recon platoon and the second deals with the doctrinal types of security at that point in time in our history.

The replacement of the M5 Stuart light tank with its 37mm cannon by the M24 Chaffee with a low velocity 75mm cannon late in WWII solved the major firepower problem in our light tanks. The Chaffee was used as a fast, highly mobile, armor protected platform with cannon and machineguns to defeat soft targets and improved positions. It was not a tank destroyer (TD)! The inclusion of the M18 Hellcat TD in recon units was considered by the General Board, USFET and rejected. The ACR received a medium tank company and other reconnaissance units were expected to receive attached tanks or TDs if needed. The argument of the tank as the best antitank weapon was already in full swing, but the light tank was a reconnaissance and security platform and did not meet that requirement. By 1950, the M41 Walker Bulldog was basically an outgrowth of the M24, with a redesigned turret and the 76mm gun from the M18 Hellcat. It was hoped that the 76mm high velocity gun would provide the added benefit of defeating the armor on medium tanks, but the upgrade of the Soviet T-34/85 to the T-54 ended that idea. For those who doubt the role of the light tank, FM 17-80 Tanks, 76mm Gun M41 and M41A1, dated Jan 1956 listed the following suggested basic loads:

	HE	AP	WP	HVAP-DS	TOTAL	
M41	36	10	6	5	57	
M41A1	40	12	7	6	65	9

In both instances, only 9% of the rounds carried on board had even the remotest change of penetrating a threat medium tank. Therefore, in this period up through 1956, the presence of the light tank in the reconnaissance platoon was not as a "quasi tank destroyer", but rather an armor protected, fire support system.

Concerning the platoon in security operations, FM 17-22 provided a thorough and detailed discussion of the types of security operations, as security was "the primary" task in the mission statement. The general discussion of security requirements varied little from today's, but there were more levels of security. The lowest level of security was "security through surveillance", either by a line of OPs or by mobile patrolling. Any platoon performing this role was capable only of giving early warning or adjusting ID fires.

The next level was the guard mission, specifically flank guard, which was expected to be the most frequent. Offensive and defensive actions, as well as aggressive reconnaissance, were added as tactical options employed in a flank guard. The third level included the platoon as a part of a covering force.

In addition to these three levels, was another type of security mission or task called counterreconnaissance. In this paragraph's text the term "screen" is used for the first time in a doctrinal context.

> A counterreconnaissance screen is an arrangement of troops, generally on an extended frontage without depth, placed to gain observation of an extended area, to deny enemy observation of such an area, or to block or delay any enemy force attempting to enter the area. The recon platoon normally performed counterreconnaissance by outposting the sector it is assigned to screen. A line of observation posts may be established, mobile patrols may be utilized, or a strong point may be established together with a combination of OPs and patrols. When enemy patrols are observed, they are reported and attacked or ambushed. 10

In essence then, there were four levels of security missions or tasks in the 1950 manual:

1) Security Through Observation - Use of OPs and patrols employing indirect fires only; direct fires only in self defense.

2) Counterreconnaissance (Screen) - Use of forces in addition to OPs/patrols that employed indirect and direct fires to defeat enemy reconnaissance efforts.

3) Guard - Use of forces to attack, defend, or delay, as necessary, to protect a main body. Employs indirect and direct fires against recon and maneuver forces and could include sub-elements performing counterreconnaissance.

4) Cover - As for guard, except at extended distances from the main body. Here again, sub-elements may be performing counterreconnaissance.

On the Atomic Battlefield of the late 50s, we would lose one level of security and modify another, but that is covered in the next chapter.

RECONNAISSANCE PLATOON 1946-56

THREAT - The threat to the post WWII recon platoon was increasingly different from the one faced by its ancestor. As the Soviets converted rifle divisions to motorized rifle divisions, the presence of heavy weapons, particularly man-

portable AT weapons increased. In their recon units, the BA-64 armored car, halftracks, jeeps and motorcycles, gave way to a new generation of equipment. The BTR-152 APC was introduced in 1950 (with the T-54 tank in 1949), BTR-40 recon vehicle in 1951, and PT-76 light amphibious tank in 1954. Still for most of this period, the security forces which the recon platoon would encounter remained essentially infantry.

TACTICAL FLEXIBILITY - If this organization had anything, it had flexibility. While designed to operate as a single team, it could separate into two teams of a scout squad and a light tank each, with the rifle squad and mortar supporting either. It could establish 2-3 OPs for extended periods using the scouts and the rifle squad. The light armor was available as an organic counter-reconnaissance element with the 81mm mortar in support. The requirement for dismounted patrolling, listening posts, and the ability to conduct limited small unit attacks to clear enemy OPs and roadblocks was still fresh from WWII. The rifle squad provided a "massed" dismount capability over and above the few dismountable scouts, for patrols or light combat tasks. The bow gunners from the M24 light tanks could OP the light armor section, but were lost when the M41 was fielded. Battle drills and recommended formations were prescribed for the first time.

COMMAND, CONTROL, & COMMUNICATIONS - The PL and PSG each retained separate vehicles, except now the PL rode in a jeep and the PSG was authorized a light tank. The PL was separate from any specific section, and so could perform the C2 function without detracting from other requirements. The PSG was tied to the light armor section, but the PSG and PL could exchange vehicles if either required the PL's jeep to move quickly to the Battalion TOC. The number of vehicular radios increased from three to seven and a PRC-8 for the rifle squad. A radio was not authorized in two the scout jeeps and the second mortar section jeep.

STAND CAPABILITY - With the importance of surveillance recognized, it is surprising that no significant gains occured here. Basically, the platoon retained a mix of binoculars and observation scopes. Simple infrared scopes were available but their ranges were very limited. The increase in dismount capability did increase the platoon's ability to man more OPs for extended periods and increase patrolling. The M24 and later the M41 light tanks had simple optics and rangefinders which could assist in the surveillance effort.

MOBILITY - No real gains were made here either. The M75, and later the M59, APC provided the armored infantry squad with a vehicle that could keep pace with the light tanks and represented the first amphibious capability in the platoon. The mortar section's jeeps were not the ideal solution for transporting a five man crew, mortar and ammunition. In 1952, the changes to TO&E 17-25R indicate that a halftracked carrier was substituted.

CONCEALABILITY & STEALTH - The retention of the jeep by the scouts meant their ability to move with stealth remained. The light armor and APC were not capable of stealth movement and generally led only when that requirement was not a priority, (i.e. attack or leading the recon when contact was expected).

WEAPONS & EQUIPMENT - One of the two jeeps in the scout squad gained a pedestal-mounted machinegun; the other carried the radio. The most significant gain was the addition of two light tanks. While the low-velocity 75mm cannon of the M24 Chaffee had limited potential as an antiarmor weapon, it (or the 76mm of the M41) was excellent in allowing the platoon to defeat OPs, roadblocks, troops in buildings, and other light armor. The platoon now had a meaningful recon-by-direct-fire and immediate suppression overwatch capability. The sole 81mm mortar provided a responsive recon-by indirect-fire capability and the ability to develop the situation at an extended distance without necessarily exposing the scouts, infantry, or light armor to return fire. Finally the light tanks and APC each mounted a .50 cal heavy machinegun which offered a reasonable air defense capability to the platoon.

SURVIVABILITY - The presence of the light tanks and APC ensured that a major portion of the platoon was protected from small arms fire and artillery/mortar fragments. The scouts remained just as vulnerable as they had been in WWII, while the mortar squad, when mounted in jeeps, lacked protection.

LOGISTICS - The presence of tracked vehicles ensured the rapid recovery of mired jeeps and the ability to recover with identical vehicles. Unfortunately, the increased number of tracked vehicles ensured the associated problems, and the M75 APC proved a maintenance nightmare. The M59 resolved this somewhat. Within the scope of its expanded combat missions, the expenditures of CL III and CL V required extra planning and attention from the battalion support systems.

ERRATA - The platoon was one of 14 maneuver platoons, and its 39 personnel were 5 1/2% of the total of 713 in the battalion (TO&E 17-25R). The two M24s, later M41s, were unique among the 72 medium or heavy tanks of the battalion.

PERCEIVED OR ACTUAL DEFICIENCIES OR SHORTCOMINGS

1) Too few "eyes and ears" in the organization (scouts).
2) Limited radio communication within the scout squad.
3) Need for more automatic weapons in the scout squad.
4) Tank section redundant with tanks available in the companies.
5) Light tanks not capable of defeating the threat medium tank.
6) Infantry squad redundant with mechanized infantry normally a part of the tank or armored infantry task force.
7) Support squad redundant with the battalion 4.2" mortar platoon.
8) PSG tied to the light armor section; could not perform independent C2 or CSS roles.

BATTALION SCOUT PLATOON - THE ATOMIC BATTLEFIELD

By the mid 1950's, the U.S. Army was seriously reviewing how a major conflict with the Soviets might be fought. The Korean War had seen weapons and tactics used very similar to those in World War II (if not WW I). The proliferation of atomic and nuclear weapons, to include tactical missiles and artillery projectiles, meant to Army planners that the "Atomic Battlefield" would have many unique and demanding characteristics. Doctrine writers began to examine the truisms of warfare. They saw a need for increased dispersal, the ability to mass quickly, strike an objective, and just as quickly disperse again. The ability to see the battlefield over greater frontages and depths, was required. Actually, in reading articles from that period, I found many similarities between the Atomic Battlefield and the AirLand Battlefield.

In 1957, the Army conducted its first major reorganization not based on lessons learned from World War II. The Reorganization of the Corps Armored Division (ROCAD) involved only a few minor changes in the basic armor force. The ROCAD variant retained four armored infantry battalions, but now had four identical medium tank battalions instead of the three medium tank and one heavy tank battalions of the earlier TO&E. Its DIVARTY increased in combat power, primarily atomic delivery capability.

The armored cavalry squadron in the ROCAD retained four ground troops, but each employed a combined arms TO&E <u>at troop level</u> with pure platoons of scouts, armored infantry, and two platoons of light tanks. Within a year, however, this organization reverted to the combined-arms, reconnaissance platoon model of scouts, infantry, light armor and a mortar. This type platoon had remained in the squadrons of the ACR.

The Reorganization of the Corps Infantry Division (ROCID) was the most radical of the changes in this period. While its division cavalry squadron retained a three troop structure of combined-arms reconnaissance platoons, the infantry regiment (with its I&R Platoon) and its battalions (each with two 4-man scout squads in the S-2 section) disappeared. In their place emerged the infantry battle group. Five battle groups made up the ROCID or "pentomic" division. Each group had an HHC, five large rifle companies, and a combat support company. Within the combat support company were a heavy mortar platoon (8 tubes), an assault weapons platoon (ATGMs), a ground surveillance radar (GSR) section, and <u>an armored reconnaissance platoon identical to the combined arms organization</u> prevalent at divisional and corps.

While there were no drastic changes to the 1957 ROCAD Tank Battalion (TO&E 17-25T) or its companion armored infantry battalion; but an entirely new organization called a <u>scout platoon</u> replaced the familiar reconnaissance platoon. The light armor section, armored infantry squad, and mortar squad were gone. Each was considered redundant with the assets usually available within a combined arms battalion task force. The new scout platoon was optimized for dispersion and for the need to gather information over the widely extended frontages and depths of the atomic battlefield.

The scout platoon consisted of a platoon headquarters of two jeeps and three identical scout sections. Each section used the basic model of two scout squads of two jeeps each. Thus this first version of the scout platoon had 14 jeeps and 39 scouts (fig 5). Under TO&E 17-25D, this was modified in 1959 to include a ground surveillance radar (GSR) carried in a 3/4 ton truck, bringing the platoon to 15 vehicles and 42 personnel (fig 6).

The initial mission statement for the scout platoon was set forth in the August 1957 version of FM 17-33 Tank Units, Platoon, Company & Battalion:

> The scout platoon performs missions of security and reconnaissance to the front, flanks and rear of the battalion. It may be reinforced with tanks and armored infantry to enable it to accomplish any of these missions. 11

While recognizing that a pure jeep mounted platoon would certainly require reinforcement to accomplish some combat tasks, this doctrine rewrite kept the security role as the lead task! The retention of the security as lead is puzzling, yet too often doctrine writers overlook important details of this sort when updating manuals. On the other hand, this manual did include some new tactical techniques, such as manning the battalion COPL with the scout platoon, reinforced as necessary.

It was not until FM 17-35 Armored Cavalry - Platoon, Troop, and Squadron was released in February 1960 that a clear, well thought out doctrinal update was available. In addition to "armored cavalry" units (a new name for armored reconnaissance), the manual covered the maneuver battalion scout platoon and the combat command HHC's scout section.

The revised mission statement reflected a reversal of primary tasks mandated by the TO&E.

> The scout platoon is organized and equipped to perform reconnaissance, provide security, and execute other missions that assist commanders in the accomplishment of their missions. 12

Even though reconnaissance was once again the lead task, the number of the missions assigned to the scout platoon, either when operating alone or when reinforced, had grown considerably. The list included:

1) Route recon to bivouac, assembly area, attack or delay positions.
2) Area recon to bivouac, assembly area, attack or delay positions.
3) Screen the battalion front, flanks or rear by establishing OPs, LPs, and patrols.
4) Advance or rear guard for the battalion.

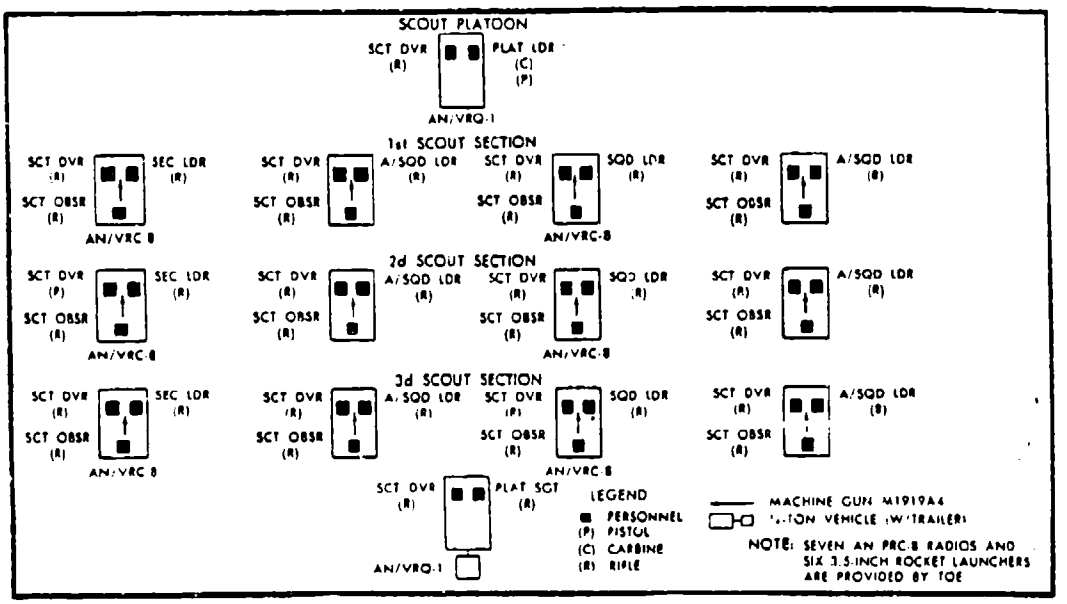


FIGURE 5 - The 1957 Scout Platoon. Machineguns are now present on each of the scout jeeps.

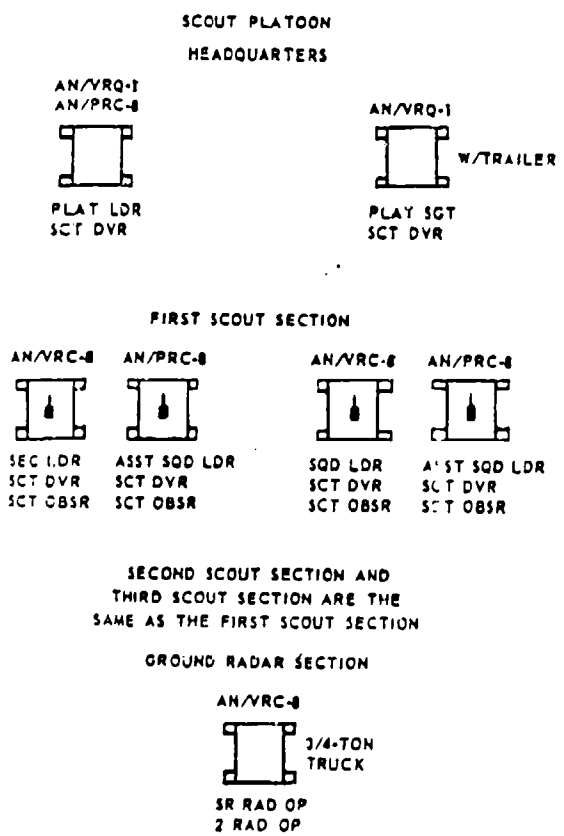


FIGURE 6 - The 1959 Scout Platoon. The Ground Surveillance Radar and 3/4 Ton Truck have been added. Also note that a second PRC-8 radio has been added to each scout squad. At 15 vehicles and 42 scouts, this was the largest recon/scout platoon assigned to a maneuver battalion.

5) Airmobile operations to observe, raid, or seize enemy positions or key terrain.
6) Combat liaison.
7) Contact party.
8) Quartering party.
9) Traffic control.
10) Limited pioneer and demolition.
11) Chemical, biological, and radiological monitor/survey operations.
12) Damage control operations.

Lest the reader believe that this was all that was expected, the next section of the manual covered techniques used by the scout platoon in recon, security, attack, defense, and delay missions.

FM 17-1 Armor Operations - Small Units, dated 23 August 1957, had first mentioned screening as a term separate from the term counterreconnaissance.

With the passage of a little over two years, FM 17-35 dropped counterreconnaissance as a doctrinal term completely, and used screen as a combination of the old Security Through Observation & Patrols, with the former considerations of the counterreconnaissance. Its new definition was:

> A screening force is a security detachment which protects an area or body of troops from surprise by observing and reporting enemy activity. It normally is conducted over an extended area. When acting as a screening force, the scout platoon secures its assigned area by establishing OPs and conducting patrols. 13

Observation and surveillance were stressed, especially when contact with the enemy was imminent. While the scout platoon normally established six OPs, twelve OPs could be established for a limited period of time. Scouts were not to fire their weapons except in self-defense, instead they utilized mortar and artillery fire to cause early deployment of the enemy. That last point was critical as the scouts had only pedestal mounted machineguns and 3.5" rocket launchers organic to the TO&E.

The most important contribution made by the scouts during recon and security missions was the accurate and timely reporting of information concerning the enemy and the area of operations, yet the integration of the GSR, a new STANO system, was only briefly mentioned.

No direct fire combat was expected, yet a diagram taken from page 33 (fig 7) showed that while 6-12 OPs could be established, only 4-8 represented the number on the average to extended screen. One third of the platoon's strength was retained for mounted (and perhaps dismounted) patrols, in depth, immediately behind the OP line. This is critical in that an organic counter-

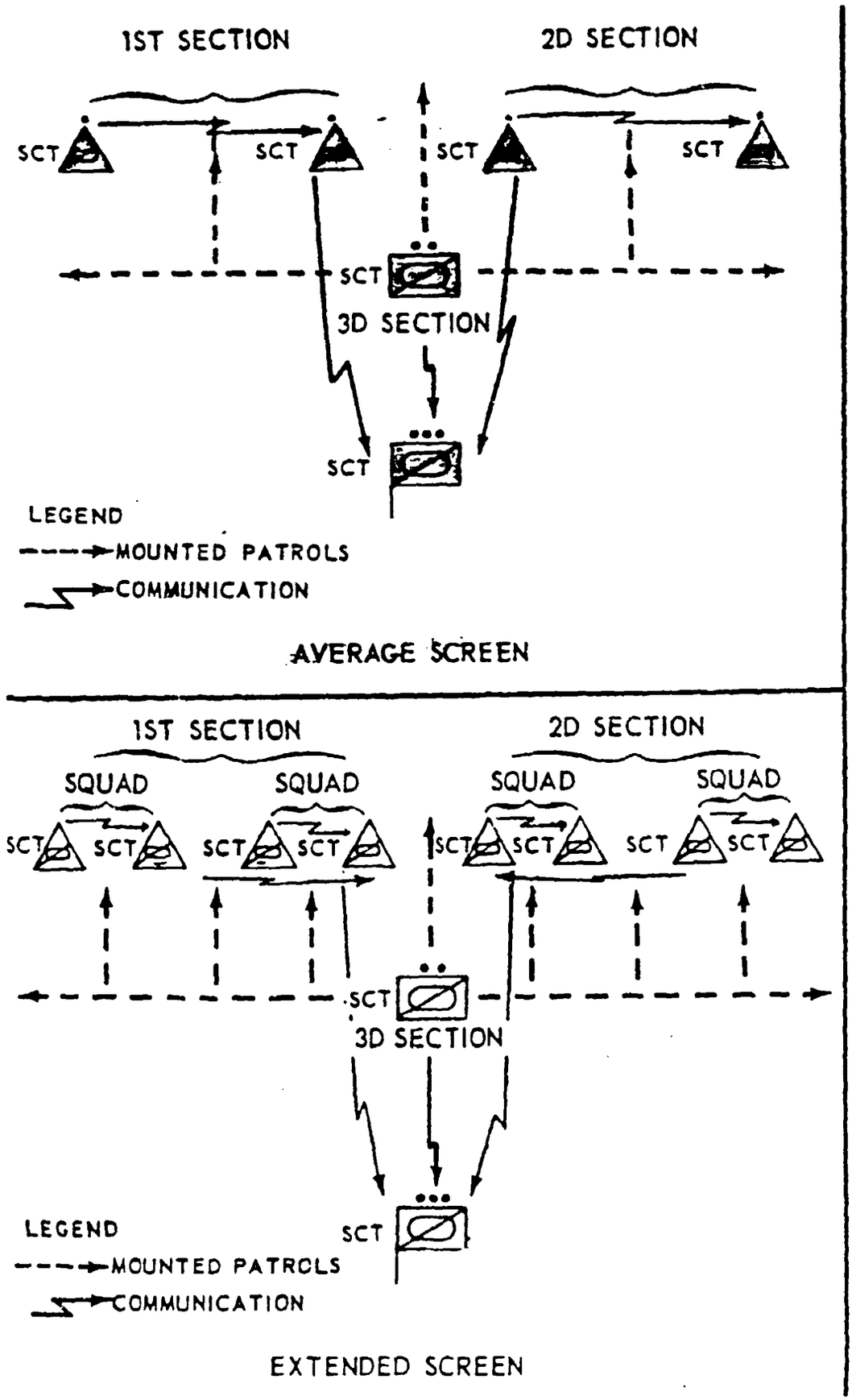


FIGURE 7 - Initial doctrinal guidance on "screening". Note the OPs conduct contact patrols between themselves while the 3d section conducts "counter-reconnaissance" security patrols to the rear.

reconnaissance effort remained, separate from the scouts on the OPs. If the scout patrols chanced upon an enemy patrol, they were expected to defend themselves. All counterreconnaissance patrolling was in addition to any patrols conducted between the OPs themselves.

In other security roles, their dependence on reinforcement was recognized.

> Security missions performed by the scout platoon include advance guard, flank guard, rear guard, and screening force missions. The most effective employment of a platoon assigned an advance, flank, or rear guard mission requires the reinforcement with tanks, riflemen, and fire support. 14

The manual continued with detailed explanations on how to attack as a dismounted rifle platoon, how to establish and defend a roadblock, and even offered that the three sections may be attached to company/teams in a delay. A moderate amount of guidance was provided for each of the additional and special missions, and on the whole, doctrine matched the platoon's capabilities.

When executing reconnaissance, the entire scout platoon was expected to obtain information by stealth, infiltration, and observation. This was a significant change from the concept of operations for their immediate predecessor with its heavier support elements. The scout platoon could handle multiple routes, up to three, with a section responsible for each. In a zone recon, two sections were usually employed abreast with the third protecting an exposed flank, acting as a reserve, or checking specific terrain features.

FM 17-35 also covered the single scout section of the armored division's combat command (brigade equivalent). It's limited mission was to provide recon on a route to a new CP site and an area recon of the site, security during the move and at the CP site, movement control, liaison, and CBR monitoring. By using a scout section for these tasks, the seeds for the misuse of the battalion scout platoon were sown. By rights, an MP section could have performed these tasks for the combat command HHC. The majority of the time, the combat command scout section ended up serving as the command post (TOC) guard. Battalion commanders, mentoring their seniors, tended to employ their scouts in this role for much of the next decade.

As a side note, clear doctrinal differences between armored cavalry and maneuver battalion scout platoons now existed in FM 17-35. Furthermore, beyond the equipment differences between cavalry and the scout platoons, differences widened a bit between the divisional and corps cavalry platoons when the ACRs in Europe were granted permission to upgrade their M41 light tanks to M48 mediums in the late 50s with a modified TO&E. A true antitank capability was provided to the cavalry platoon for the first time, but only at the corps level.

In retrospect, the most important aspect of the introduction of the "scout" platoon was the backlash effect on doctrine and the TO&Es. The two philosophical schools of thought were now well founded in print and in the field. One stressed recon and surveillance through stealth, the other multi-purpose recon and security. The legitimization of both schools has fueled many an argument which continues through today.

THE SCOUT PLATOON 1957-61

THREAT - The ground threat to the scout platoon was an ever modernizing Soviet Army. The BTR-50 tracked APC began to supplement the BTR-152 wheeled version. More important, the BRDM-1, a fully enclosed, armored car began to replace the open topped BTR-40 in reconnaissance units. The T-55 first appeared in 1960 with the BTR-60 arriving a year later. The bottom line was that the threat was becoming increasingly armor protected and with only the 3.5" rocket launcher available for self-protection, many thought the scouts were at a severe disadvantage.

TACTICAL FLEXIBILITY - The strength of this TO&E was the large number of actual scouts it offered the battalion. Its three sections could perform recon separately, either on three different routes under battalion control, or with one or more sections attached/OPCON to a company team. The presence of the third section was a definite plus given its ability to perform mounted or dismounted patrolling in support of the OPs of the other scout sections, and thus not diluting their CONOPS surveillance capability. The recognized shortfall of this platoon was its need for attachments for any combat mission exceeding the capability of a dismounted rifle platoon. I can find no record of true battle drills. Movement techniques included alternate or successive bounds, possible because each scout jeep had a pedestal-mounted machinegun. The platoon suffered from two drawbacks. First, it lacked an effective recon-by-fire capability, and second, it had to stand down the third scout section to mass a dismounted capability.

COMMAND, CONTROL AND COMMUNICATIONS - This platoon organization finally resolved all of the C2 and most of the commo shortfalls. The platoon leader and platoon sergeant each had a jeep with a radio and an extra scout observer. If positioned together, the six-man element could provide C2 with its own local security. If separated, they could provide C2 over an extended frontage. The PSG or a single scout jeep from the 3rd section could serve as a relay to the battalion TOC if the platoon were operating far to the front. Each of the vehicles had a FM radio. All were VRCs except the second scout jeep of each squad which had a PRC-8. Each scout was trained to act as a messenger. An obvious value of the 3rd section was it ability to perform ancillary C3 tasks without having to deplete the other sections. The authorized enlisted grades were increased (e.g. platoon sergeant was a MSG, while section sergeants were SFCs.

STANO CAPABILITY - The scouts still used binoculars and observation telescopes, no gains here. The introduction of a single ground surveillance radar provided a very limited night or poor visibility surveillance capability. The GSR issued to the scouts was the TPS-33, a medium range set with a range of about 7800 meters against vehicles. The presence of the third scout section provided a patrolling capability without decreasing surveillance from established OPs.

MOBILITY - Again no big changes here. If the scout jeeps were not overburdened with mines, grenades, and other equipment or ordnance, their mobility was still very good. Scouts tended to dismount when near the enemy, and therefore could go anywhere an infantryman could and not be encumbered by equipment left on the vehicle.

CONCEALABILITY & STEALTH - This was a definite strength of this TO&E. The jeep remained a small, quiet, easy to hide reconnaissance platform which allowed rapid dismount. It did not have the ability to project smoke rapidly if it was observed and attempted to break contact.

WEAPONS & LETHALITY - The platoon had twelve pedestal-mounted machineguns (initially .30 cal, later the M60 7.62mm), and since each of the scout jeeps now had one, either element could overwatch the bound of the other. Each scout squad was also equipped with the 3.5" rocket launcher (6 total in the platoon). This provided a reasonable self-defense capability against all armor except the latest medium or heavy tanks, yet with its limited range, it was not a weapon of choice for "developing the situation". Recon-by-fire with organic weapons was limited to machinegun fire. Heavy antiarmor support and all indirect fires were provided by the battalion or supporting DS artillery.

SURVIVABILITY - This was the greatest weakness of a reconnaissance force mounted in open-topped, unarmored vehicles. Stealth was of paramount importance as to be discovered was to risk easy destruction. These scouts were vulnerable to all forms of direct and indirect fire...the lightly armored jeep called for in the many reports issued at the conclusion of WWII had not been developed. Most puzzling was the fact that with the expected radiation in atomic combat, the jeep offered its scouts no protection from direct radiation or fallout, yet it was used over an all-APC force. Obviously survivability was seen as a factor of the scouts' training and tactics, not his equipment.

LOGISTICS - Even with 15 vehicles, the strain on the battalion support system was negligible. A jeep could run for close to two days without refueling and if everyone did his job correctly, no ammunition would be expended. The platoon sergeant, in a separate vehicle not tied to the three scout sections, was freed to coordinate resupply. The jeep had a fairly high RAM, could assist other jeeps when mired, and was repaired, evacuated, or replaced easily.

ERRATA - The scout platoon was one of 13 maneuver platoons, the assault gun platoon eliminated in 1957. Its 42 personnel represented the largest number of scouts assigned to the reconnaissance/scout organization within the battalion, and comprised a healthy 6% of the battalion total of 716 personnel.

PERCEIVED OR ACTUAL PROBLEMS & DEFICIENCIES

1) Inability of the platoon to perform combat reconnaissance, all levels of security missions, and economy of force combat without reinforcement.
2) The scout jeeps had no deep wade or amphibious capability.
3) The scouts had insufficient survivability in unarmored, open-topped vehicles.
4) The jeeps suffered from a growing mobility gap with newer generation tracked vehicles (M48 and the new M60), especially cross-country.
5) The scouts had limited firepower for self defense and for developing the situation.
6) The three scout sections (six squads) and a GSR section possibly exceeded the span of control for a single lieutenant.
7) The pure scouts lacked the versatility of the combined arms team.
8) Was <u>economy of force combat</u> a maneuver battalion scout platoon mission?

RETURN OF THE RECONNAISSANCE PLATOON - ROAD DIVISION

In the early 1960s, the Army faced another major restructuring effort. The "pentomic Army" was considered to be too specialized for the needs of atomic warfare. What was needed was a better balance of forces which could fight either on a mid to high intensity conventional or nuclear battlefield.

The Army was also fielding a significant amount of new equipment, among which were the M60 tank, M113 APC, M60 machine-gun, SP artilley, ADA systems, helicopters, and the M114 Armored Command and Reconnaissance Vehicle. The restructuring effort produced the Reorganization Objective Army Division (ROAD), which had a great impact on the maneuver battalion scout.

The new ROAD armored division had six tank battalions and five mechanized (previously armored) infantry battalions. The combat command was replaced by a tactical brigade headquarters. The tank battalion, under TO&E 7-35E (15 Jul 63), was reduced from four to three maneuver tank companies with tank strength dropping from 72 main battle tanks to 54. Thus while the division end strength grew in tanks (288 to 324), the battalion lost 25% of its combat power and maneuver forces.

The scout platoon was no longer; the reconnaissance platoon reappearing virtually overnight. Apparently the pure scout platoon had not sold completely in the Army, certainly not in the armored cavalry community. The armored cavalry proponents in Armor branch have clout similar to the "airborne mafia" in the infantry. A jeep-mounted, scout platoon seemed a throwback to something akin to horse cavalry or the 'discredited' WWII reconnaissance platoons. The true versatility of the combined arms cavalry platoon to perform recon, security, and economy of force combat missions made this change almost inevitable. The result represented the fourth philosophical swing since 1942.

The latest version of the battalion reconnaissance platoon was now more like an "ersatz" cavalry (fig 8). In fact, the draft tank battalion TO&E had proposed the title "Battalion Armored Cavalry Platoon".

The platoon leader in both the battalion reconnaissance platoon and higher echelon armored cavalry platoons had a M114. Each of the platoon types had a single scout section (4x M114) divided into two squads of two vehicles each. All had a rifle squad mounted in the M113 APC. The recon platoon had a light armor section of two M41A1 tanks. The division cavalry platoon had two M41A1s, but also included a 4.2" mortar squad (fig 9a). Finally the ACR's cavalry platoon also had the mortar squad, but added a third M41A1 (fig 9b).

What is critical to note is that these organizational differences recognized the increased needs of armored cavalry which operated away from the immediate support of maneuver company/teams, or battalion mortars. The end result was that while the strength of the ACR armored cavalry platoon remained at 1 officer and 41 soldiers, division cavalry dropped to one and thirty-seven, and the new reconnaissance platoon came in at an officer and 32 scouts.

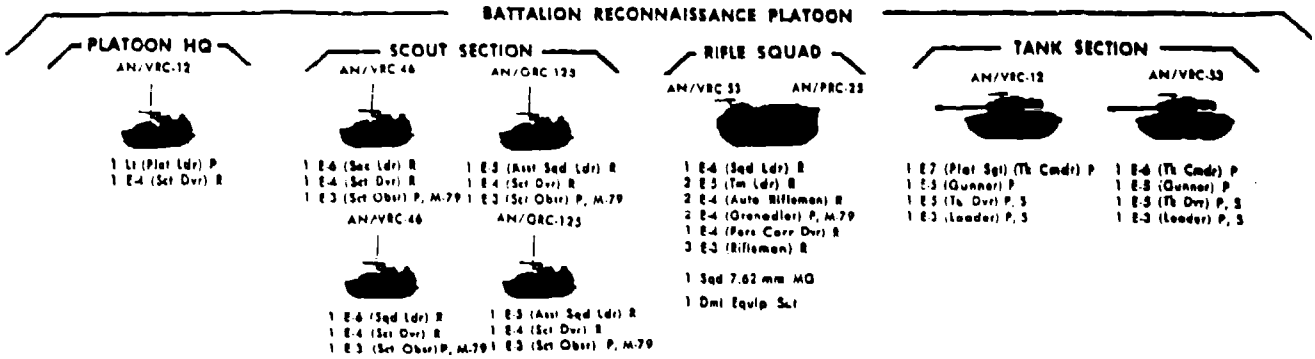


FIGURE 8 - Battalion Reconnaissance Platoon, cira 1964.

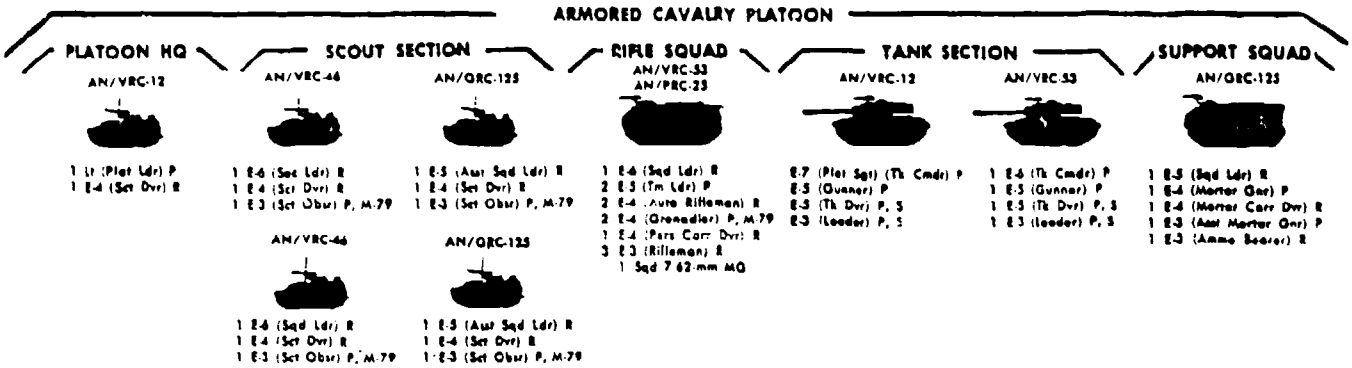


FIGURE 9A - Divisional Cavalry Platoon, cira 1964.

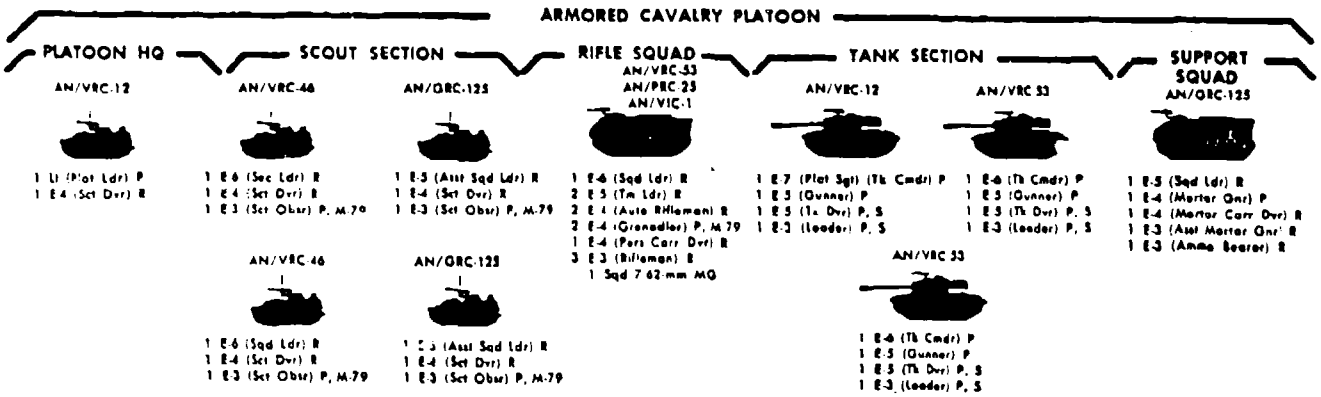


FIGURE 9B - Armored Cavalry Regimental Platoon, cira 1964.

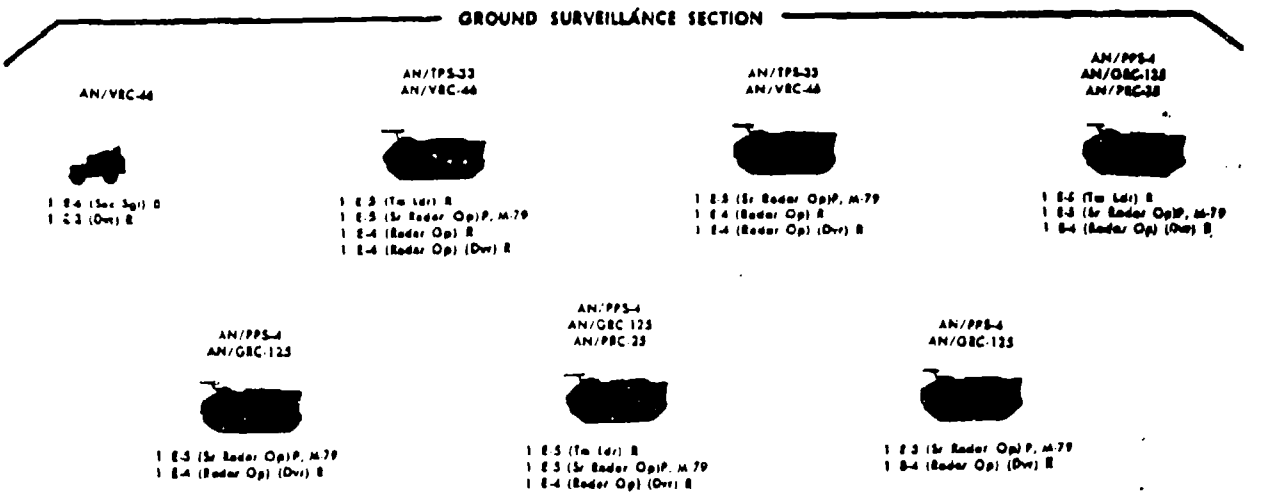


FIGURE 10 - Ground Surveillance Radar Section, cira 1963.

The cut in the end strength of the scouts was about 25%, similar to the battalion it supported. The M114 was supposed to provide greater survivability for the scout section, in part justifying the reduction. However, the cavalry received first priority of fill with the new M114, so many tank and mechanized infantry battalions retained the jeep for this TO&E's duration.

One can be misled by the seeming reduction in surveillance capability as another factor came into play. A new type of unit, which when coupled with the recon platoon, provided the battalion the most robust and capable recon/surveillance force seen to date. A nineteen-man ground surveillance radar section was added to the HHC (fig 10). Its six APCs, each equipped with a TPS-33 medium range radar or the newer PPS-4A short range model, actually bolstered the combined percentage of forces dedicated to recon and security to 9% of the battalion. It was accepted that the increased survivability of the armored vehicles in both the recon and GSR units, coupled with the increased technological capability of the radars, and the versatility of the combined arms recon platoon, would be the key to better employment of the three maneuver companies!

The doctrine community never got around to writing a new battalion manual for this force. Perhaps they were too busy documenting the actual changes, rewriting lesson plans, publishing school texts, or whatever. Perhaps the word went out to the recon platoon leaders to simply use the doctrinal tactics, techniques and procedures from previous manuals. Some official changes were published, but I was unable to locate copies. Regardless, this platoon TO&E would be short-lived.

An article written in the January-February 1965 issue of ARMOR by CPT Rafael Garcia provided a heralding of the next change. As a graduate of AOB in 1959 and the career course in 1964, he had served as an armored recon platoon leader, troop XO, and regimental assistant S-3 and S-2 of the 11th Armored Cavalry Regiment. His article, "The Reconnaissance Platoon - What Will It Be Like Tomorrow?", speculated on 'official' rumors as to future changes in the battalion recon platoon.

He clearly drew the parallel that as the ACR is to the corps, and the squadron is to the division, so the armored cavalry platoon is to the tank battalion. Recapping every advantage of the cavalry organization, his key argument was:

> . . . planners foresee that the reconnaissance platoon of the battalion will fight only when absolutely necessary for protection. This I believe to be optimistic since the reconnaissance of the past has had to fight not only to protect itself, but also to accomplish its mission. The scout elements employ stealth, infiltration, observation, and movement to obtain information. However when necessary the platoon will fight to accomplish its reconnaissance mission. In a case such as this I feel that the proposed platoon WILL NOT have the necessary firepower to accomplish its mission in an armor environment. 15

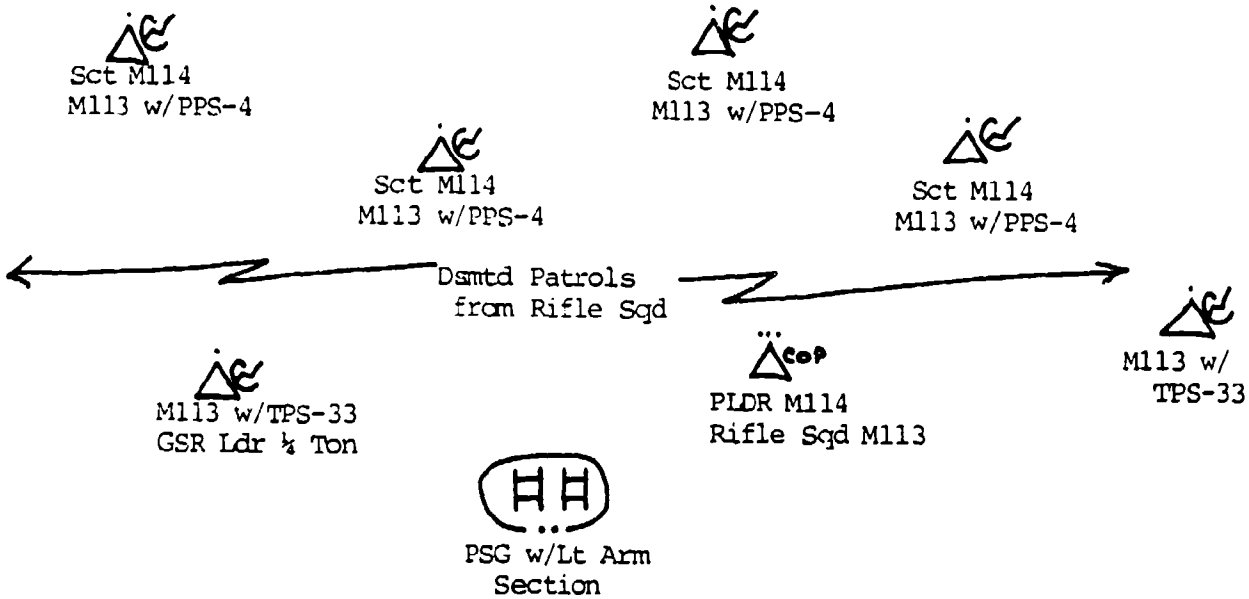
His article is a good one, well written and presenting both sides of the case. He allowed that the all-scout platoon may be able to perform a number of the ancillary missions better than the combined arms platoon.

Here were the two basic organizational philosophies at odds. I believe his position was true for cavalry, but his arguements lost some punch at the battalion level. Maneuver companies and battalion mortars are immediately available to support the battalion reconnaissance platoon. Time/distance factors, C3 differences, and training requirements provide an entirely different situation for the cavalry squadron operating in support of the division or corps. Yet in the end, it really didn't matter. In less than four years the pendulum would swing for a fifth time.

RECONNAISSANCE PLATOON 1962-1966

THREAT - By this time, the Soviet Army had been motorized completely. Motor rifle units were mounted either in BTR-50s or BTR-60s. The RPG-2 and RPG-7 were on-hand or arriving as man-portable antiarmor weapons. ATGMs, fielded in the mid to late 1950s, were growing in increasing numbers although they had not been tested in combat. The T-54 and T-55 tanks would soon be supplemented with the first T-62s. Still the basic threat to the battalion reconnaissance platoon remained the same. The security forces or combat reconnaissance patrols of the Soviet Army would be motorized rifle squad or platoons. His specialized reconnaissance patrols consisted of BRDM-1 armored cars, motorcycles, and perhaps a PT-76 light tank. Here too, things would soon change.

TACTICAL FLEXIBILITY - Not a lot new; just a return to the old. The combined arms platoon TO&E was optimized to work on a single route and laterals. Its single scout section was overwatched by the light armor, and the rifle squad was available to provide a "massed dismounted" capability for tasks exceeding the scout's capabilities. The platoon could establish three OPs using the scout and rifle squads and retained the light armor section to provide supporting direct fires (incl organic counterreconnaissance element). If coupled with the robust GSR section, the platoon could run even more OPs (fig 11) and retain a significant counter recon capability, but I never found this recorded as a doctrinal tactic or technique. A hidden loss to the platoon was the fifth crewman which had been the bowgunner on the earlier versions of the light tank. His departure meant that immediate combat replacements for the crew, and the light armor section's ability to easily provide its own local, two-man security OP, were gone. Finally, this platoon used the battle drills for armored cavalry units, like its post WWII predecessor.



This notional laydown employs OPs in depth, the majority with ground surveillance radars. It allows sufficient strength on each OP for CONOPS, while retaining enough force for dismounted counterreconnaissance patrolling and a mounted reaction/ambush element.

FIGURE 11. NOTIONAL SCREEN WITH 1963 ROAD SCOUT PLATOON & GSR SECTION

COMMAND, CONTROL, & COMMUNICATIONS - All of the vehicles retained their FM radios and the rifle squad had an extra PRC-25 for dismounted use. The platoon leader retained his separate vehicle, but lost his third crewman. This probably caused long hours during radio watch and lowered his local security. The PSG (now as an SFC) returned to a M41A1 light tank, and thus was pretty well tied to that element. Mounted messenger capability was diminished in this TO&E unless a scout M114 or the infantry squad's M113 were used (misused) in that role.

STANO CAPABILITY - The reconnaissance platoon had no added capability over any of its predecessors. In fact, it lost its radar to the GSR section. As a whole, however, the battalion gained significant surveillance capability with its two TPS-33 and four PPS-4A ground surveillance radars.

MOBILITY - Ideally, the TO&E now had all tracked vehicles, yet as I stated before many battalions retained their jeeps during this period as not enough M114s had been bought. The M114 had superior cross-county capability over the jeep. More important, the M114 and the M113 were both amphibious. The M114 was also light and small enough to be able to cross many low MLC bridges which could not support the M41A1s or even the M113. The M114 was never accused of being overpowered, but early on there were few complaints.

CONCEALABILITY & STEALTH -- The M114 was small and almost as concealable as a jeep. It could not match the jeep for stealth during movement. This was the first time since WWII that our scouts did not have a true stealth capability when mounted! None of the vehicles had a smoke grenade projecting or generating capability. One last point, the M114s were unique to scouts or unit commanders. If they were observed, the enemy was certain his foe was either a scout or a commander. From that standpoint, the uniqueness of the M114 was a disadvantage.

WEAPONS & LETHALITY -The ROAD reconnaissance platoon was clearly a unit in transition. The contribution of the M41A1 was limited. Its basic load had never stressed antiarmor ammunition (6 HVAPDS rounds of 65 total), yet it was clearly being expected to fill the role of a tank destroyer if required. All eight of the vehicles mounted the .50 caliber M2 heavy machinegun which provided a reasonably good antimaterial/anti-light armor capability given the threat at that time. All eight vehicles also possessed either a .30 cal or 7.62mm machinegun, (coax, flex, or dismounted) to provide additional antipersonnel capability. The 3.5" rocket launchers were gone, replaced by the new M72 66mm LAW which everyone could carry and fire. Overall, the lethality potential looked very good against everything but tanks.

SURVIVABILITY - The M114 was a vast improvement over the jeep in terms of survivability. It represented the "lightly armored" jeep which had been called for in the post WWII studies. It provided reasonable protection to its three man crew from small arms fire, mortar, and artillery shrapnel. It was fully enclosed, so the entire platoon was now completely armored for the first time. While there was no collective NBC protection on the platoon's vehicles, they were much better off in an NBC environment than in the all-jeep scout platoon.

LOGISTICS - The M114 ACRV had some initial maintenance problems and was more demanding than the jeep. The rifle squad's M113 APC proved better than either the M75 or M59 versions which had previously equipped it. The age and low density of the M41A1s within the maneuver battalion caused unacceptable problems which ultimately led to its removal. CL III usage was up over the all jeep scout platoon, and one would have expected CL V usage to increase given the return of recon by direct fire coupled with the light tank cannon and high proportion of machineguns. Likewise, recovery of vehicles required more forethought than the pure jeep TO&E.

ERRATA - With the deletion of the fourth maneuver company, the recon platoon was one of 10 maneuver platoons. Coupled with the exceptionally robust GSR section, however, the surveillance capability of the battalion had never been (or would ever be) better. The recon platoon represented 6% of the battalion's authorized strength of 575, a full 9% if the GSR section were included in the equation.

PERCEIVED OR ACTUAL PROBLEMS & DEFICIENCIES

1) The light armor section proved superfluous with the medium tanks available in the battalion task force.

2) The M41A1 was incapable of performing its assigned or implied mission given the upgraded equipment of the threat.

3) There was an insufficient number of scouts in the platoon.

4) The M41A1 were becoming a maintenance problem and their low density in the force only magnified the poor supply parts situation.

5) Peacetime reductions in personnel manning coupled with the new demand for soldiers in a growing involvement in Vietnam equalled intense competition for infantry in the Army. While the cavalry kept their rifle squad for a few more years, the eleven maneuver battalions of armored or mechanized divisions tied up the equivalent of almost 1 and 1/3 mechanized infantry companies in the rifle squads of their recon platoons. This luxury could no longer be afforded.

THE BATTALION SCOUT PLATOON - VIETNAM

The G-Series TO&Es appeared in the mid-Sixties and was the first modification of the ROAD units coming as the Army was increasing its force levels in Vietnam.

In the doctrine community, the first manuals since the pentomic period hit the street. The doctrine needed to change because the battalion reconnaissance platoon had once again become a scout platoon. A mere four years had passed! If this seems confusing, appreciate how it must have been for those dealing with it at that time.

Under TO&E 17-35G, the scout platoon returned to the battalion with a platoon headquarters of one M114 for the platoon leader and a M113 for the platoon sergeant (fig 12a). Now the platoon had only two identical scout sections, each consisting of four M114s and divided into two squads of two vehicles each. At one officer and 30 scouts, the platoon lost only two men to creeping attrition. The battalion also retained the robust GSR section of 17 men and 6 GSRs, (fig 12b).

The major changes to equipment meant that this platoon could not use all of the tactics and techniques of the armored cavalry platoon. Obviously new manuals were in order.

The first to be published was not an update to the tank battalion manual, but FM 17-36 Divisional Armored and Air Cavalry Units. Oct 65, which superseded the older FM 17-35 of 1960. It dropped all references to the maneuver battalion scout platoon, yet its study is imperative in tracing doctrinal inconsistencies, especially since scouts, as "cavalrymen", were apt to read and follow its guidance.

In chapter 4, concerning the employment of the armored cavalry platoon, it stated the existing norms for scout operations:

> (On reconnaissance), scout elements employ stealth, infiltration, and observation, and movement to obtain information. When necessary, the platoon will fight to accomplish its reconnaissance mission. 16
>
> Scouts mounted in armored vehicles DO NOT HAVE THE CAPABILITY OF MOVING BY STEALTH (my emphasis). Using the inherent armor protection and cross-country capability of these vehicles, scouts will normally lead the formation. When there is a threat of enemy armor or armor-protected antitank weapons, the tank section must be prepared to lead.
>
> Scouts mounted in unprotected vehicles will usually lead the formation when very little or no enemy action has been encountered, fields of fire or terrain favors enemy ambush, and natural obstacles are prevalent. 17

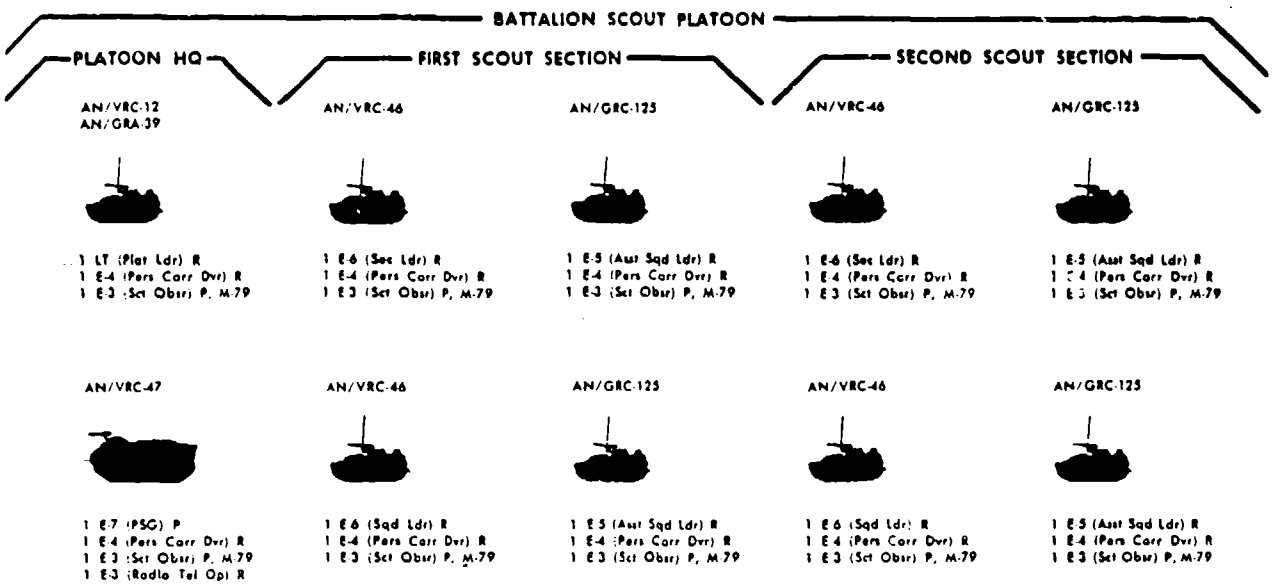


FIGURE 12A - Battalion Scout Platoon under TO&E 17-35G, cira 1967.

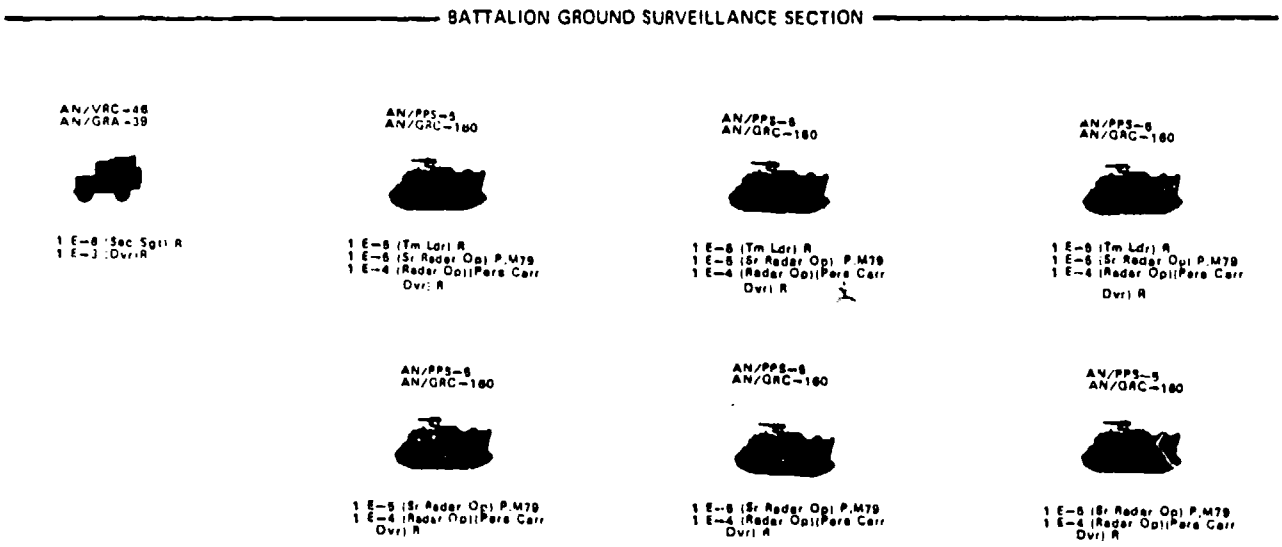


FIGURE 12B - Battalion GSR Section, cira 1967.

> Within the platoon, reconnaissance by fire is normally accomplished by the tanks and support squad. 18

Three things need to be noted. As of 1965, voluntary engagement of enemy forces was still to be avoided unless the mission required it. Second, scouts mounted in the M114 ACRV could not perform mounted recon by stealth. Third, recon by fire in cavalry was not the responsibility of the scout section, they observed its effects. Also under actions on contact, as the armored cavalry platoon developed the situation only two methods were given, either recon by fire or mounted/dismounted patrols.

A final doctrinal emphasis was given under the conduct of reconnaissance operations.

> In the conduct of reconnaissance missions, collecting information is the primary task and must not be jeopardized by unnecessary combat with the enemy. In many situations the troop will be required to fight to obtain the desired information. Whenever possible, the troop should avoid combat and bypass enemy resistance to accomplish the mission. 19

Leadership problems, caused by the change from recon, to scout, to recon, and back to scout in less than ten years were another factor. Recall CPT Garcia's views expressed in his article and the crossbreeding of scouts between cavalry and maneuver battalion reconnaissance platoons. A new second lieutenant was briefly exposed to cavalry operations in his basic course. Supposedly this training also covered maneuver battalion recon platoon operations, since at times the TO&Es were identical and many of the basic doctrinal missions were the same. If as a 1LT, he found a different, "scout platoon" a few years later. his natural inclination would still be to use cavalry tactics and his scouts generally expected no less. The confusion caused by the continuous doctrinal and organizational changes had to have much the same affect on battalion commanders, their staffs, and other senior officers.

Within six months, in March 1966, FM 17-15 Tank Units - Platoon, Company, and Battalion arrived. It superseded the 1957 version of FM 17-33 by including an appendix on the scout platoon and superseded the "how to scout" portion of FM 17-35 from 1960. It would not be replaced until 1977, and even then the scout platoon would not receive comparable guidance. Not until the mid 80's, would maneuver battalion scouts get a Department of the Army approved, separate manual with doctrinal tactics, techniques, and procedures on how to do their job.

Appendix III - The Scout Platoon in FM 17-15 expanded on what was already a full plate for the scouts. Their mission statement was reduced to simply performing reconnaissance and security, and assisting in the control of the battalion's movement. But, their list of capabilities had expanded to:

(1) Conduct route reconnaissance.
(2) Conduct area reconnaissance.
(3) Conduct zone reconnaissance.
(4) Screen one flank, or the front, or rear of the parent battalion.
(5) Conduct liaison.
(6) Provide contact parties.
(7) Act as a quartering party.
(8) Provide traffic control and road guides.
(9) Conduct limited pioneer and demolition work.
(10) Conduct CBR detection, monitoring and survey operations.
(11) Participate in area damage control.
(12) Establish a roadblock.
(13) Act as part of the advance, flank, or rear guard.
(14) Establish observation posts and listening posts.

If you believe that this was all that was expected of a scout platoon which had shrunk by one scout section since 1960, other missions/tasks were scattered throughout the text including providing rear area security, assisting in the evacuation of prisoners, and providing security for the command group or the TOC.

Additional changes to tactics and techniques were evident. Recon by fire was to be used only if time was a critical factor, but now had to be done by the scouts in M114s. This platoon could only establish four OPs (up to eight for short periods), yet without the third scout section, counterreconnaissance patrolling in support of the OPs could be accomplished only at the expense of reducing the total of OPs employed. At a roadblock, the number of scouts was significantly less than the three-section, pentomic platoon and the amount and type of direct fires was less than the previous ROAD recon platoon.

The only mention of integration of the GSRs into the scout platoon is a three line paragraph which states that the GSR section is normally attached to the scout platoon. That there was no guidance on how best to do this was probably an oversight that only a new armor lieutenant could enjoy. Beyond that, no mention of other STANO equipment existed.

One last addition was the paragraph, "Scout Platoon in Counterinsurgency Operations." A doctrinal bone thrown to those who were moving to Vietnam in increasing numbers, the scouts were cited as being particularly able to:

(1) Provide escort for convoys.
(2) Provide a reserve force.
(3) Assist in controlling the population through mobile check points.
(4) Contribute information on guerrilla forces and the AO.
(5) Contribute to military civic action by requesting medevac and providing emergency transportation of the sick or wounded.

Meanwhile, the U.S. Army Combat Development Command was issuing a report in May 1966 titled, Doctrinal Basis and Armament Requirements for the Armored Reconnaissance Scout Vehicle (ARSC)(U). The ARSC would be the replacement for the M114 ACRV, which was already beginning to show a number of shortcomings. Three criteria were noted as the basis for the ARSV; a 12,000 lb weight limit, frontal protection against 12.7mm or smaller from 100 meters out and flank protection against 7.62mm API or smaller. It was not provided specialized STANO capability. The Soviet BRDM-1 was seen as its primary adversary and a realistic view of the scout's needs were summed up here:

> It is not rational to expect the ARSV to duel with any reasonable chance of survival with a vehicle larger than its own weight and protection class. This fact must be accepted by the scout in accomplishing his mission. 20
>
> Realizing that the (scout) platoon mission will often require the ability to fight, the concept provides tanks, infantry, and mortars as a balanced team with complementary firepower system which can readily and forcibly act on the information reported by the scouts. In scout platoons, this complementary firepower when required is furnished by the parent battalion. Any endeavor to up-gun the scout vehicle at the expense of compromising its other more essential characteristics fails to recognize the true role of the scout in relationship to the remainder of the organization. This is not to imply that the vehicle should not have the most lethal weapon available which would be compatible with its other characteristics. It does, however, illustrate that the basic organizational and operational concepts dictate that primary effort be directed to providing this vehicle with the optimum observation, reporting and mobility (size, weight, configuration) potentials which may be obtained. Since the choice of weapon will have a profound effect upon the other design parameters, it is essential that such a weapon be the smallest possible which is adequate for effective performance of its role. No penalty in other ARSV combat functional areas (i.e., observation, communications,and mobility) can be accepted. 21

The report provided a list of prioritized, likely targets and rejected target categories. Note these as we move into the 70s:

Prioritized, Likely Targets	Rejected Target Categories
(1) Dismounted Personnel	(1) Tanks (all classes)
(2) Strongpoints	(2) Armored Personnel Carriers
(3) Soft Materiel	(3) Armored ATGM Carriers
(4) Suspected Areas (rcn by fire)	
(5) Light Armored Vehicles	
(6) Aircraft	

The final contribution to the ever increasing confusion over what the maneuver battalion scout platoon should do and how it should do it, was the Vietnam War itself. Prior the spring of 1965, U.S. Army soldiers were in Vietnam in an advisory role or serving in combat support or combat service support assets. A Marine Expeditionary Force landed in March, quickly followed by the 173rd Airborne Brigade (with E Troop, 17th Cavalry). As the war escalated, more forces were added. Initially the conflict was viewed as a light infantry/artillery/helicopter war, but mechanized infantry, cavalry, and armor finally were deployed and proved their worth.

The Army of the Republic of Vietnam had used M113 APCs since April 1962 with great success. The M114 ACRV had been briefly introduced, but it suffered from being underpowered in the rice paddies. Due to the design of its front hull, which projected well over the tracks, it also had a very limited climbing capability when confronted with a step of 20" or more. This meant that it could get into rice paddies, but could not climb out over the dikes. With this fact known, scout and cavalry units arriving in-country had already exchanged their M114s for M113s.

In the G-Series TO&Es the divisional cavalry platoons gained a third vehicle in the light armor section, so it was identical to the regimental cavalry platoon (Fig 12e). The cavalry M113s were modified, becoming the armored cavalry assault vehicle or ACAV, with two wing mounted M60 machineguns to complement the .50 cal. The typical five man crew consisted of the driver, vehicle commander manning the .50 cal, two scouts on the M60s, and the fifth scout employing a M79 grenade launcher from the cargo hatch. Recon by fire was in! Dismounting was out!

In 1967, USARPAC developed MTOE 17-35G which directly affected the scout platoon and GSR sections of heavy maneuver battalions in Vietnam. The scout platoon rose to an all-time high of 50 scouts, five crewing each of ten M113 ACAVs, while the GSR section was reduced to two M113s, two AN/PPS-5 radars, and six men (figs 12c and 12d). With the firepower of thirty machine guns and ten grenade launchers, this platoon had much more punch than a light infantry company and was about on par with a mech company.

The combined arms teams of the cavalry had originated with the lessons learned from WWII. Cavalry units were very robust, organized to operate away from other supporting maneuver forces and to fight if necessary. Vietnam proved that cavalry optimized to fight if required, easily became "fighting cavalry". This legacy would DEROS with them!

One of the maxiums of the era was the Four F's: Find 'em, Fix 'em, Fight 'em, and Finish 'em. This is generally what a combat unit was supposed to do to the enemy, with cavalry's role seen as finding them through reconnaissance, fixing them by determining the size, type, and disposition of the enemy, and as necessary, fighting them to gain that information. The maneuver forces supported by the cavalry, would fight and finish a foe.

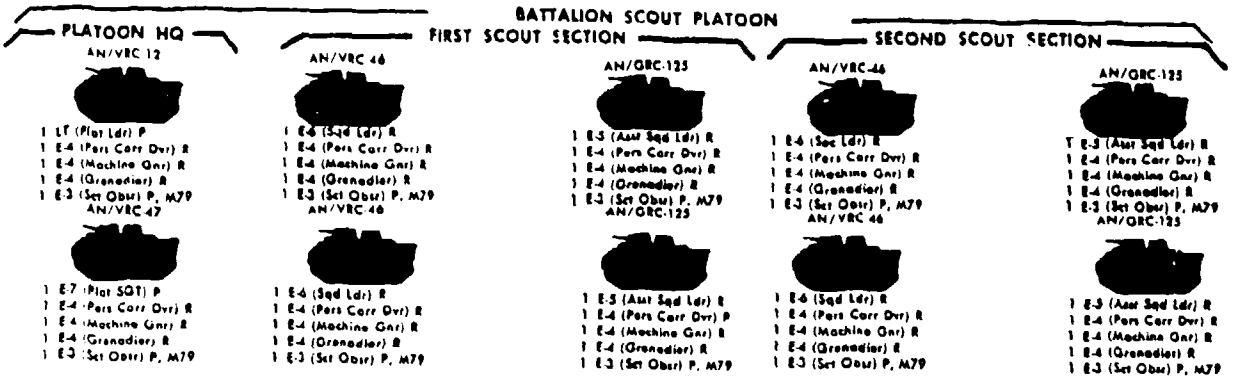


FIGURE 12C - Battalion Scout Platoon in Vietnam - USARPAC MTO&E 17-35G (Mod), cira 1968.

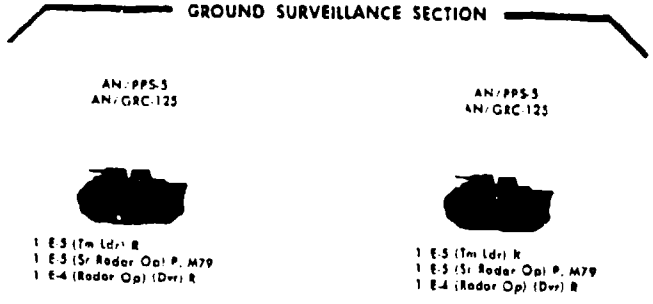
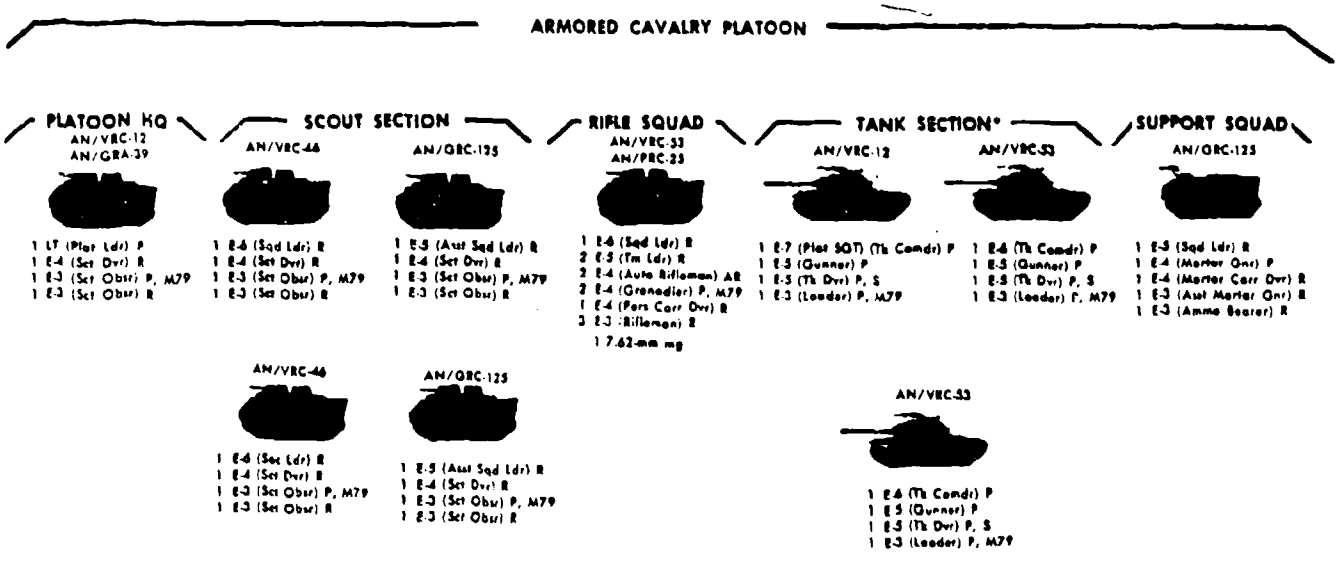


FIGURE 12D - Battalion GSR Section in Vietnam under USARPAC MTO&E 17-35G (Mod), cira 1968.



* May be issued M551 or M48A3.

FIGURE 12E - Armored Cavalry Platoon - USARPAC MOT&E, cira 1968.

In Vietnam, the nature of the war would not allow this distinction. A cavalry (or for that matter a scout) platoon which came in contact with the enemy no longer limited itself to finding and fixing. It was a vital element in fighting and finishing the engagement like any other maneuver force. The tactic of piling-on, reinforcing a contact with all available ground and helicopter assets, became standard practice by aggressive cavalry commanders who were now aggressive cavalry fighters. The nature of the conflict changed the nature of our cavalrymen. Where was the elan in "sneaking and peeking?" Even the LRRPs, essentially long range, dismounted scouts, were prone to taking direct action.

The 11D scout MOS, common to both cavalry and maneuver battalion scout platoons, did much to bring this spirit to the scout platoon. Since only three U.S. Army tank battalions and nine mechanized battalions fought in Vietnam, the predominance of scouts in theater were in the cavalry. Divisional armored cavalry squadrons, separate armored troops, "D" or ground troops of air cavalry squadrons, and of course, the 11th Armored Cavalry Regiment provided about 75 cavalry platoons compared to 12 maneuver battalion scout platoons, over a 6:1 ratio.

The demands in the the maneuver battalions for an additional maneuver platoon and the elan of the scout/cavalryman, drove the scouts into a combat role. Even without supporting light armor or mortar sections, the scout platoon in the maneuver battalion became an elite "mini" cavalry force.

Between 1965 and 1972, many generations of scouts, scout and cavalry platoon leaders, troop commanders, and senior officers learned cavalry and scout operations, 'a la Vietnam'. In CONUS and USAREUR, the drain on trained scout NCOs and junior officer leadership had a severe effect on the abilities of scout platoons. Map reading and the discipline to dismount to "sneak & peek" were the first skills to suffer. Soldiers rotating from 'Nam brought the "emerging tactics" with them, gradually affecting the entire reconnaissance force.

The elite, successful, aggressive fighting force which cavalry and scouts had become; the recon by direct fire and piling on tactics they fostered; all this would not be easily undone after Vietnam.

BATTALION SCOUT PLATOON 1966-70

THREAT - The threat to the scout in this period was twofold. The threat he faced in Vietnam was primarily light infantry employing mines and RPGs in close terrain. The other threat was the Soviet Army. The BRDM-2 with a 14.5mm heavy machinegun was introduced, outgunning the M114 with its .50 caliber machinegun. The BMP-1 was issued to front line Soviet forces for the first time in 1967. This infantry fighting vehicle now gave the motorized rifle squad or platoon a choice of fire support from its 73mm low velocity gun, its coax machinegun, or a AT-3 SAGGER ATGM. BMP-equipped security elements would be more difficult to handle, if the scout was seen or if he chose to fight for information.

TACTICAL FLEXIBILITY - The return of the all-scout TO&E in armored vehicles provided some tactical flexibility, but did not compensate for the loss of the 3rd scout section. The number of OPs which could be manned was reduced, unless the majority of the GSR section were attached to the scouts. Even this did not provide the dismounted patrolling capability the earlier scout platoon had provided. The scout's organic counterreconnaissance capability was lessened, not increased, by the substitution of a GSR section and the M114 ACRV vehicle for the third scout section. This organization did not have true battle drills. The 1960 movement techniques by vehicles within the squad or by squads in a section was simply updated to reflect the presence of the M114 instead of the jeep.

COMMAND, CONTROL & COMMUNICATIONS - This version of the scout platoon provided the most capable headquarters section of all of the versions. The platoon leader had his own M114 with two crewmen, while the PSG had a M113 with three crewmen. The additional crewmen greatly eased radio watch and local security of the command element in a CONOPS environment. It also meant that the PL and PSG had complementary C2 nodes without detracting from the operation of the scout sections. All ten of the vehicles had FM, short range radios. The PL and PSG had two net capability. Half of the M114s employed VRC-46 FM radios, while the other half had GRC-160s, capable of being converted into a PRC-77 for dismounted use. The initial use of crypto sets occurred late in this period, but the platoon leader often went without due to the requirement for the secure systems on higher echelon command nets. The use of a scout vehicle as a messenger was felt more severely due to the lack of the 3rd scout section which had picked up many special missions. This particular tactic began to fall into disuse.

STANO CAPABILITY - The scouts were still using binoculars and observation telescopes, but added passive night observation devices to its inventory late in this period. With starlight scopes, the scouts could employ individual and crew-served weapons without the requirement to call for illumination. While still a separate section, the presence of six GSRs meant surveillance in near zero visibility was still possible. The GSR section was usually attached to maneuver companies or to the scouts. As an aside, the GSR section of the mechanized battalion switched from M113s to all wheeled vehicles under the G-series TO&E. I believe a reason for this was the increased need for M113s in the Vietnamese Army, and the drawdown of these APCs was an acceptable decrement to the Army's force structure. The tank battalion retained their M113s for its GSRs but would lose them in the H-series TO&E.

MOBILITY - Even though the light armor and mortar track were gone, the platoon remained all tracked. The M114 ACRV performed fairly well in Europe, but abysmally in South Vietnam. Its lack of reserve power and poor design for climbing a step, became major factors in the call for a new scout recon vehicle.

CONCEALABILITY & STEALTH - At that time, stealth was not a relative term in the mind of a scout. Jeeps provided stealth because they were small, low, and quiet in terms of engine noise and tires. The M114 was small, but larger than the jeep. More important it was noisier, even with a continuous band track of cable reinforced rubber. FM 17-36 clearly differentiated between the two. Armored scouts used their inherent armor protection and moved using the terrain to best conceal themselves. No progress had been made on generating or projecting smoke to aid in concealing scouts who may be discovered while moving from cover to cover.

WEAPONS & LETHALITY - The platoon was liberally equipped with automatic weapons if it had anything! In addition to ten .50 caliber machineguns, were nine M60 machineguns and a complement of M16A1 automatic rifles or M79 grenade launchers. At full TO&E strength, literally every man was either driving or firing a machinegun. The M113 ACAVs, if substituted for the M114s, provided even more firepower, as noted earlier in this chapter. The M72 LAW remained the only antiarmor weapon available for self-protection. With the introduction of the BMP and BRDM-2, the lethality of the .50 caliber machinegun with AP ammunition was wanting.

SURVIVABILITY - While an all-scout force, the fact that every vehicle was armored provided a good level of survivability against small arms fire, mortar and small artillery fragments. The M114 ACRV met the intent of the post WWII studies in providing that absolutely essential level of protection for the scout. The Army discovered that M114/M113s were not much better than jeeps when faced with antitank mines. The sandbagging of floors and the technique of riding on top of the vehicle became accepted practice in Vietnam. Finally, the M114 was at risk when facing the 14.5mm HMG of the BRDM-2 or 73mm cannon of the BMP-1.

LOGISTICS - The M114 continued to serve well, but did not offer the simplicity of the jeep, hence required more maintenance. The commonality of the vehicle in the platoon, and the increased number in the battalion as a whole, meant a greater supply of spare parts in the unit's PLL. The large number of automatic weapons coupled with a recon by fire mode of operations, usually meant a high usage of ammunition and spare barrels. The PSG's M113, by virtue of its weight and superior power, could assist in recovery of mired M114s and could easily tow them with a bar. The M113's extra room allowed for platoon common equipment.

ERRATA - The scout platoon remained one of 10 maneuver platoons in the G-series TO&Es. Reduced from 1+32 to 1+30, the steady attrition of the scout platoon was continuing. The scout platoon represented 5% of the 599 aggregate of the tank battalion, 8% if the GSR section is factored in.

PERCEIVED OR ACTUAL SHORTCOMINGS & DEFICIENCIES

1) The M114 was underpowered.

2) The M114 lacked lethality and range with its .50 cal to combat its chief advisory, the BRDM-2. M114A1 with M139 20mm cannon was developed in 1965, but fielding was delayed due to the costs of the Vietnam War.

3) The remaining two scout sections were having to overcompensate for the loss of the third section. Many ancillary missions could not be easily accomplished.

4) The loss of GSR M113s raised the incompatibility between the all-track scouts and the jeep and trailer combinations of the GSRs.

5) The scouts were losing the capability to dismount, in part because they were mounted in tracked vehicles, and in part because there were fewer scouts available to dismount.

THE BATTALION SCOUT PLATOON - POST VIETNAM & THE H-SERIES

In 1970, the Army conducted another force revision, the results of which established the H-series TO&Es. The H-series came to be after the United States had made the decision to Vietnamize the conflict and withdraw all U.S. ground forces. I presume the intent was only to streamline the G-series, since most of the changes to maneuver battalions did not significantly affect their end strength or capability.

TO&E 17-35H (Nov 70) reorganized the tank battalion with a smaller HHC, three tank companies, and a new combat support company or CSC. The CSC was similar in nature to that which had been found in the pentomic infantry battle group. It had a company headquarters, the battalion heavy mortar platoon, an armored vehicle-launched bridge (AVLB) section, the ground surveillance radar (GSR) section, a new Redeye air defense section, and the battalion scout platoon. The HHC retained the battalion headquarters, the communications platoon, and the essential combat service support elements.

Separately the units of the CSC were very similar to their G-Series counterparts except in two cases. The ground surveillance radar section was severely reduced. Its APCs were gone, probably to the South Vietnamese Army. It retained only four short range GSRs, carried in jeep trailers (figs 13A/B).

The scout platoon lost the fourth crewman on the PSG's M113, thus it reached the "magic" aggregate of 30, at which it seems destined to remain. The number of scouts authorized in the platoon has not waivered from that number since, but as you have seen, there was nothing special about it because recon/scout platoons had varied between aggregate strengths of 21 and 50 since WWII (fig 14).

The cavalrymen that returned to CONUS or transferred to Europe, came out of Vietnam an aggressive, hard-charging breed. This was especially true of the officer corps. Recon and surveillance may have been their primary tasks, but they had flexed their muscles, seen and felt what a combined arms combat team could accomplish. Cavalry was now an elite, combat force, and with the crossover of scouts to battalion scout platoons, this feeling carried well into the Seventies.

Dispite their elan, scouts can not live on that alone. A trained NCO Corps, the backbone of real institutional knowledge, was at a low ebb. As the Army rebuilt under the VOLAR and the Modern Volunteer Army programs in 1971-3, its new junior NCOs were unskilled (many from "shake & bake" courses), while even some of the more senior NCOs were unsure of basic reconnaissance skills. The knowledge of "how it was in Nam" did not always provide the answers.

As a result, scout platoons began to operate in larger and larger groups, usually an entire section moved together, sometimes the entire platoon. Many things might account for this. The erosion of map reading skills did not foster confidence that one could navigate in squad size units without getting lost.

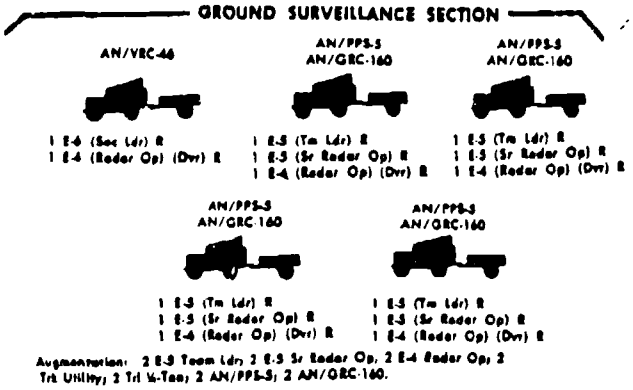


FIGURE 13A - GSR Section under TO&E 17-35H

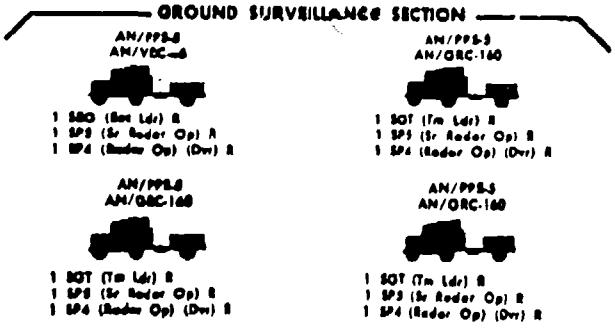


FIGURE 13B - GSR Section under TO&E 17-35H

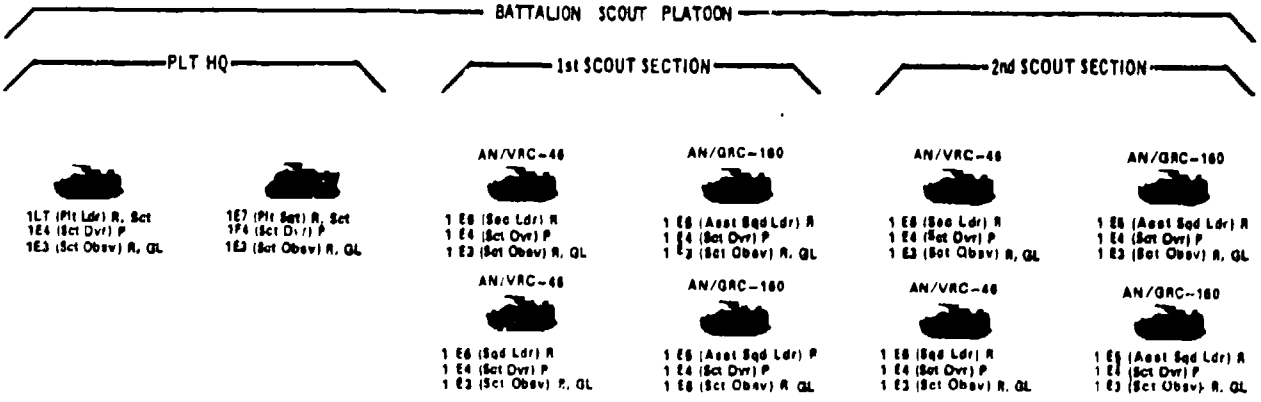


FIGURE 14 - Battalion Scout Platoon, cira 1971 (TO&E 17-35H)

Furthermore, scouts usually directed massed firepower on the enemy to develop the situation, so the entire section or platoon was needed in the fight, regardless of whether it was cavalry or not. Remember, the scout platoon's ten vehicles equalled two and a half mechanized platoons.

The M114A1 with the M139 20mm cannon had been developed in 1965. It was slow to arrive in the field due to the diversion of funds to the Vietnam War, but by the early 1970s, enough of the upgunned versions were in the field so that even maneuver battalion scout platoons were receiving a full or at least a partial issue. The 20mm cannon was provided to give the scout the ability to combat his primary advisary, the Soviet BRDM-2. In fact, he could now fight two classes of vehicles which the 1966 ARSC Study believed were not his responsibility, APCs and IFVs.

The combat development community, well intentioned in their effort, had moved the ACRV scout vehicle into a new class. The jeep was a wheeled, unarmored vehicle which provided stealth, and had a machinegun for self-defense out to 1000 meters. The basic M114 was essentially a tracked, armored jeep with much less 'stealth' and a combination of heavy and light machineguns with a range out to 1500 meters. The M114A1 was more like a tracked, mini-tank with even less stealth (the added weight of the gun required the driver to gun the engine quite often when maneuvering cross-country), and a light automatic cannon with a range out to 2000 meters. The incremental improvements of the scout's mount, coupled with his experience in Vietnam would have far reaching results in the decade.

By 1973, the effects of the Vietnam conflict reached written doctrine. The basic tank battalion manual, FM 17-15, received a mere cursory change to note that a combat support company now existed. It was composed of units which, for the most part, were common in the armor and mechanized infantry forces. The biggest change came in the revised FM 17-36 Armored Cavalry - Platoon, Troop, and Divisional Armored Cavalry Squadron, in June 1973. The doctrine writers were captains and majors, all Vietnam veterans with one or more tours. They were supported by a cadre of senior NCO instructors with similar credentials. How could their aggressive spirit not find its way into print?

In the first chapter, the usual, "avoid engagement with the enemy except in self-defense" was mentioned. Yet on the first page of Chapter 3, "Employment of the Armored Cavalry Platoon", the concept that "the platoon will fight when necessary to accomplish its mission," was italicized to provide added emphasis; as if urging the reader to look for a fight. The most significant difference immediately followed:

> The location, mission and tactical situation of the scout generally presents him with a variety of enemy targets. Those targets that he can destroy without degrading his primary mission must be rapidly engaged and destroyed. (con't)

As a general rule, the scout should employ his weapons in order to:

- Defend himself.
- Destroy targets within this capability only when such engagement will not adversely affect mission accomplishment.
- Conduct reconnaissance by fire.

In most instances, he engages targets that he can destroy.

Aggressive conduct of reconnaissance and security presents many targets to the scout he can defeat. These targets are destroyed provided such engagement will not adversely affect mission accomplishment. For targets beyond his capability to defeat, the scout can request additional direct and indirect fires through the platoon leader. 22

Remember that a WWII scout fired only in self-defense. The scout of the 50s and 60s, when organized like a cavalry unit, might conduct a legitimate recon by fire with the light armor or mortar sections. The 1965 doctrine continued to stress initiating an engagement only when necessary to accomplish the mission. In Vietnam, our scouts were actively engaging in recon-by-fire, but now in the 70s, he was told that he should engage any target he can destroy (without degrading the mission). How did the average scout know whether he was putting the mission in jeopardy?

We had given him a vehicle with a 20mm cannon and the ability to kill point targets out to 2000 meters. If he were properly concealed, he had no business engaging an enemy at will that was 2000 meters away with direct fire. Note that the field manual specified the scout to use his organic weapons! The use of artillery or mortars remained a separate option. This manual also did not differentiate between cavalry scouts which make up a far greater proportion of the force, than maneuver battalion scouts which have other maneuver combat assets immediately available.

You might also recall the requirement for mounted scouts to employ stealth. In 1973 however, the condition was stated differently:

> Scouts mounted in tracked armored vehicles have less capability of moving by stealth than do dismounted scouts. 23

This statement presumes they actually had some capability. In fact, stealth as a doctrinal term had become meaningless since its definition fit convenience and was becoming increasingly relative.

As the scout became a fighter, his compatibility with the surveillance mission of the GSRs grew less. The GSR section began to be employed separate from the scout platoon and under

the direct supervision of the S-2. The scouts, on the other hand, were used as a specialized maneuver platoon by the S-3. Coordinated activities between the scouts and the GSRs tended to be by chance rather than intent.

Finally, in Chapter 10, "Surveillance Planning", was a real addition to doctrine. While covering the vast array of equipment which was developed during the Vietnam War, one small ironic bit of truth appeared:

> Man is Best. An alert, well-trained observer is the most reliable surveillance system. 24

Unfortunately, in the late 1970s and especially in the 1980s with the beginning of AirLand Battle, the machine would assume the dominant role.

BATTALION SCOUT PLATOON 1971-75

THREAT - Our refocus on Europe gradually increased throughout this period. The Soviet Army had 'stolen a nights march on us' in the development and fielding of a new generation of equipment. The BMP was the predominant infantry combat vehicle, and while its performance was less than sterling in the 1973 Arab-Israeli War, the SAGGER ATGM that it mounted had caught the world's attention. This wire-guided missile had taken some of the starch out of the vaunted Israeli Armored Corps. The maneuver battalion or cavalry scout now had this threat, in addition to all of those I have already covered in previous chapters, with which to contend.

TACTICAL FLEXIBILITY - There were no organizational changes between the G and H series TO&Es which limited tactical flexibility. The limitations came from a degradation of NCO and soldier skills, a misplaced sense of over-aggressive elan and esprit, and a veritable fait accompli concerning the undoing of reconnaissance doctrine. No battle drills were developed for the maneuver battalion scouts in M114A1s.

COMMAND, CONTROL, & COMMUNICATIONS - The typical scout platoon leader at the close of this period was not a Vietnam veteran. He wore a handlebar mustache, with a black beret or stetson, had a red & white guidon on his M114's antenna, wore a red & white ascot with every conceivable uniform, and had a "If You ain't Cav, you ain't Shit!" bumper sticker on his sports car. So much for command control. Senior NCOs that remained on active duty during the VOLAR period deserved beatification. The 'shake & bake' junior NCO, (mostly post-draft volunteers) lacked skills, but had determination. It would take a half decade but things would improve. Communications did not change much, except that the platoon leader had a better than average chance of having his own crypto device on his FM radio.

STANO CAPABILITY - While the number of GSRs in the battalion went down, the skill of their operators went lower still. Most could provide only the rudimentary, "I hear something, they must be coming", about the same time that an aggressor came in contact with the COPL. Each scout vehicle had at least one NOD or starlight scope (PVS-2, TVS-2, or TVS-4). Having the equipment on hand was not as great a problem as insuring that someone would use and maintain it.

MOBILITY - Age was catching up with the fleet of M114s and with the increased weight of the M139 20mm cannon, the situation had finally reached the point where it was generally accepted that the M114 was no longer a viable solution.

CONCEALABILITY & STEALTH - While the M114A1 was small and could use terrain masking by selecting a route carefully and moving with deliberation, this tactic was not always possible with an aggressive movement to contact. True stealth was not possible unless dismounted movement was employed. Given the speed and tempo of most operations, coupled with the movement of scouts in whole sections or entire platoons, concealability and stealth were at a premium. There was still no smoke capability in any scout vehicles.

WEAPONS & LETHALITY - The M114A1 equipped scout platoon was exceptionally lethal provided the M139 cannon didn't jam at the wrong moment. Every scout that wasn't a driver had an automatic crew-served weapon and his individual weapon. Add LAWs, Claymores, antitank mines, grenades, blocks of C-4, cratering charges, bangalore torpedos, and a full complement of "Rambo knives". Maybe the M114 wasn't underpowered, but just overburdened!

SURVIVABILITY - The survivability of the M114A1 came into question, but not because it was any more vulnerable to small arms, grenades, antipersonnel mines, or mortar/small artillery fragments. It was, however, increasingly vulnerable to ATGMs and tank & IFV cannon fire. This was known and accepted in 1966, but would drive post-Vietnam combat developers to extremes almost a decade later.

LOGISTICS - The M114A1s were showing their age and more prone to breakdown, especially when the effects of terrain, weather, and overloading were allowed to work in concert.

ERRATA - With a moderate decrease in the GSR section and a incremental decrease in the scout platoon, the aggregate recon and surveillance force in the battalion accounted for just over 7 1/2% of the 571 soldiers assigned. The scouts alone were just 5% of the force.

PERCEIVED OR ACTUAL PROBLEMS & DEFICIENCIES

1) The M114A1 ACRV was exceptionally underpowered.

2) The M114 series was showing its age with increasing breakdowns and unreliability.

3) The M139 20mm cannon was prone to jamming.

4) The Arab-Israeli War of 1973 had proven a predominance of ATGMs on the battlefield. The ATGM overmatched the capabilities of the 20mm cannon. And by God, the scout had no ATGMs!

5) There were many other things wrong, but no one seemed to care unless it was a weapons system.

THE BATTALION SCOUT PLATOON - THE ACTIVE DEFENSE

WHAT CAN BE SEEN CAN BE HIT - WHAT CAN BE HIT CAN BE KILLED! It was one of many catch phrases and buzz words that became a part of Army jargon during the active defense period of the late Seventies. We entered the last half of the decade having scrutinized the outcome of the 1973 Arab Israeli War. Training and Doctrine Command (TRADOC) issued its first bulletin on weapons, tactics, and training in April of 1975 and followed with a new version of FM 100-5 Operations in July of 1976. As the Army practiced and debated the doctrine of Active Defense, the last half of the 1970s saw a great resurgence in the interest given to its heavy, close combat forces. All eyes focused on Europe as we struggled clear of the aftermath of Vietnam.

The H-Series TO&Es were still in effect, moving steadily through the nineteen odd changes before succumbing to the J-Series in the 1980s. The battalion scout platoon underwent an extensive rollover of materiel in the mid-70s. The M114A1s were turned in and the platoon drew M113s. The long awaited replacement for the Armored Command & Reconnaissance Vehicle had finally died for a number of reasons. Combat developers were having some difficulty in deciding exactly what they wanted it to do, and Congress wasn't in the mood to fund our equivocation on the issue forever.

In Change 11 to TO&E 17-35H, the scout platoon kept the same organization - a platoon headquarters and two scout sections of two squads each (fig 15). It remained at an aggregate strength of 30 scouts. The big difference was in weapons and lethality. Now all ten M113s carried a .50 cal M2 machinegun each and nine had a M60 machinegun for local dismounted use. Initially, four of the M113s were provided with a pedestal-mounted TOW launcher, the M220. Shortly thereafter, the remaining four scout M113s were issued the M47 DRAGON, while the M220s received a kelvar TOW-CAP as protective cover over the exposed gunner.

Why the TOW and DRAGON/ATGMs? In part it was to provide the scout with a means of 'developing the situation at extended ranges'. It also was intended to provide the scout the firepower necessary for self-protection against all classes of vehicles (including tanks) out to 3000 meters. In addition to our Vietnam experience, I believe it also had something to do with what was called battle calculus.

We knew that the Soviets employed fixed doctrinal movement and attack formations to ease command and control during offensive operations.

> In the battle calculus, measurable quantities were computed and analyzed in terms of minutes into the battle. Analytical categories included ratios of opposing forces by troop strength and weapon type, rate of enemy advance, intervisibilities across terrain, best ranges of fire by weapon type, comparative rates of fire, number and opportunities

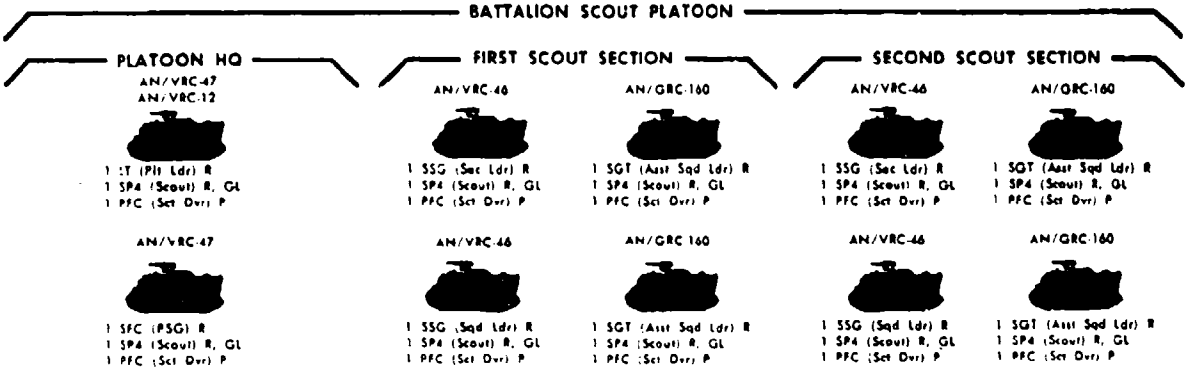


FIGURE 15 - Battalion Scout Platoon, cira 1976 (Late H-Series TO&E)

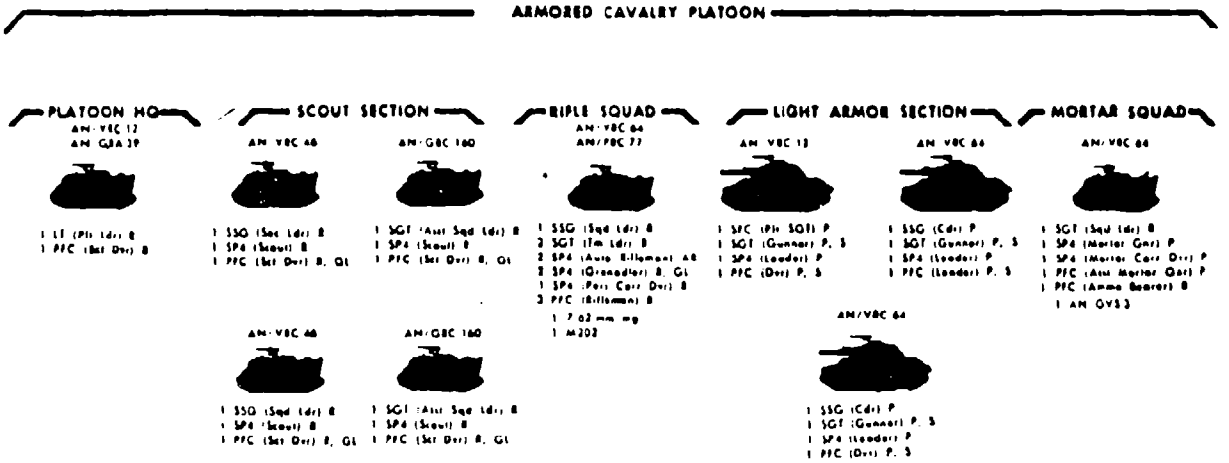


FIGURE 16 - Armored Cavalry Platoon, cira 1972 (Early H-Series TO&E)

to fire, number of commander decisions, and time lengths to call for and receive attack helicopter support and Air Force close air support.

These factors and others permitted calculations of targets to be (serviced) - the central task of the Central Battle. Kill rates by weapon type at various points and times and tactical levels could be estimated. The calculus suggested that large levels could be estimated. The calculus suggested that large attacker-to-defender ratios (5:1 or greater) would be required to overcome an organized, determined defense. 25

For the average tank or mechanized infantry battalion, the problem was usually restated thusly - can we kill all of the T-64s and BMPs opposing us before they kill us? It was too similar to the video game Space Invaders, for just as the player had to move his spaceship from left to right and back across the screen, the commanders from battalion to division were asked to use lateral movements and repositioning. This and the lack of traditional reserves allowed a higher percentage of the ground combat power to be committed early, hopefully to service the targets quickly and resolve the action in our favor.

The role of the scouts was clearly restated in Chapter 6 of the new FM 71-2 Tank and Mechanized Infantry Battalion Task Force, published in 1977. Allowing that the platoon was liberally equipped with antitank weapons:

> It should not be employed as an antitank platoon - the scout platoon's primary mission is seeing the battlefield. 26

Stealth continued to suffer from a definition of convenience. Now scouts were to employ stealth whether the operation was mounted or dismounted, however the manual goes on to state that usually, the scouts remain mounted.

The scouts most recent requirement while on a screen embodied the tenants of counterreconnaissance.

> A screening force fights only for self-protection, or within its capability to deny enemy reconnaissance units close-in observation of the main body. 27

It also mentioned that patrols are used to cover dead space and make contact in areas between OPs. Unless reinforced with the GSR section or mechanized infantry, the scouts generally lacked the personnel to conduct such patrols.

As a CSC Commander in a tank battalion in Europe in 1977-78, my scout platoon at one point mustered only fourteen assigned scouts of the thirty authorized. The doctrine might be valid, but the TO&E, further constrained by austere manning, rendered the tactic not feasible.

A major symptom of the doctrinal chaos appeared in a FM 71-2 section on the use of the scout platoon in defensive operations. While the preferred uses of the scouts included a forward screen, and subsequently either a flank screen or OPs in depth, the following tactic was mentioned both in the text and illustrations:

> Should the need arise, the scout platoon can be used as small reserve! 28

While a caution followed that this mission should not be assigned routinely, it was in fact done regularly during exercises and ARTEPs.

Why this was included can be explained in part because the scouts had the TOW. Appendix J on the Antitank Platoon emphasized - DON'T WASTE TOW! The scout platoon's MTO&E had four M220 Pedestal Mounted TOW Vehicles, and this chapter stated that occasionally additional TOW vehicles could be attached to scouts screening a particularly dangerous flank. This clearly inferred that the scouts would shoot TOWs in addition to other direct and indirect fire in the accomplishment of the screen. The implied combat role was closer to a guard task, which the scouts had not had as a doctrinal mission since the late 40s, and then when they were a combined arms team with light armor and mortars.

> If the scout platoon was initially employed as a screen force forward of the FEBA, the terrain they occupy may be suitable for employment of TOW. The commander should consider reinforcing the platoon with TOW sections and even tank platoons to start the attrition of enemy armor well forward of the FEBA, and deceive the attacker as to the location of the main battle area. In this role, TOW sections were used as "hit-and-run" weapons, getting off one or two missiles, and then returning rapidly to previously prepared positions in the MBA. 29

This guidance seems to adhere to the philosophy that as the ACR was to the corps concerning the covering force fight, so the scout platoon was to the battalion task force. Yet this scout platoon was not the cavalry surrogate like its ancestors. Basically the screen line began the direct fire battle on the approaching enemy (in addition to their other tasks, hopefully), and then withdrew. This was not just counterreconnaissance, and made the scouts just another elite fighting platoon.

Getting back to the M113, it did provide superior mobility over the M114 and resolved many of the maintenance problems associated with the older ACRV. Also it was visually common with the APCs of the mechanized infantry, so did not telegraph a message to the enemy that forces to his front were scouts.

The loss of the 20mm cannons seemed more than compensated for by the return of the .50 cal M2 machineguns (more reliable) coupled with the presence of four heavy (and later four additional medium) ATGM launchers. The latter were exceptionally lethal and given their extended range, conceivably provided the scouts better protection than before.

Remember that the scout had never had a heavy antiarmor weapon. The post WWII studies had rejected the adoption of the M18 Hellcat tank destroyer, and the M24 or M41 light tanks never filled the bill. While regimental cavalry platoons had included medium tanks, these did not belong to the scouts. Now the scout had a heavy AT system! Now he could reach out and touch someone! Now he could do some serious developing of situations!

In fact the TOW proved no boon. It could not suppress rapidly in the overwatch mode, had minimum range limitations, could not be used in heavy brush (forests) or where the guide wires might be damaged, come in contact with high tension wires, or drop into large standing bodies of water. It was also handicapped with an exceptionally slow rate of engagement when compared to antitank guns. The crewman servicing the weapon was exposed during the missile's time of flight to everything but bird droppings, which the kelvar TOW-CAP solved! The three man scout crew did the work of a four-man 11H infantry antiarmor crewman, and that certainly did not allow for dismounted scout operations. Furthermore, given the cost of e missile, one usually did not conduct reconnaissance-by-fire with it.

FM 17-95 Cavalry, appeared one month later in July 1977. As significant as it was, the increase in the overall combat potential that the TOW gave the maneuver battalion scout platoon was nothing compared to the changes in the armored cavalry platoon.

The last version of the combined arms, cavalry platoon (fig 16) gave way in 1977 to a new look. Each divisional armored cavalry platoon had a headquarters with one M113, a scout section of two squads (each with a scout M113 and a M220 with pedestal mounted TOW), and finally a large tank section with four M60A1 main battle tanks (fig 17). The rifle squad was gone and the mortar squads consolidated at troop level. Each scout squad had ten scouts so the platoon retained a credible dismount capability, while the TOW and tank cannon gave it a quantum leap in combat power.

It also stressed that to perform their mission, the scouts should frequently dismount to reduce the chances of being detected. Another insight was that a vehicle moving behind dismounted elements destroys stealth. Remember that maneuver battalion scouts in 1977, had neither the strength to dismount a meaningful scout complement, nor a doctrinal technique to do so. FM 71-2 stated that scouts usually remain mounted during their reconnaissance. So much for stealth in the battalion scout platoon.

The cavalry's tank section provided rapid, high velocity antiarmor fires, so it appeared the tank destroyer mission finally had came to the cavalry under the Active Defense doctrine.

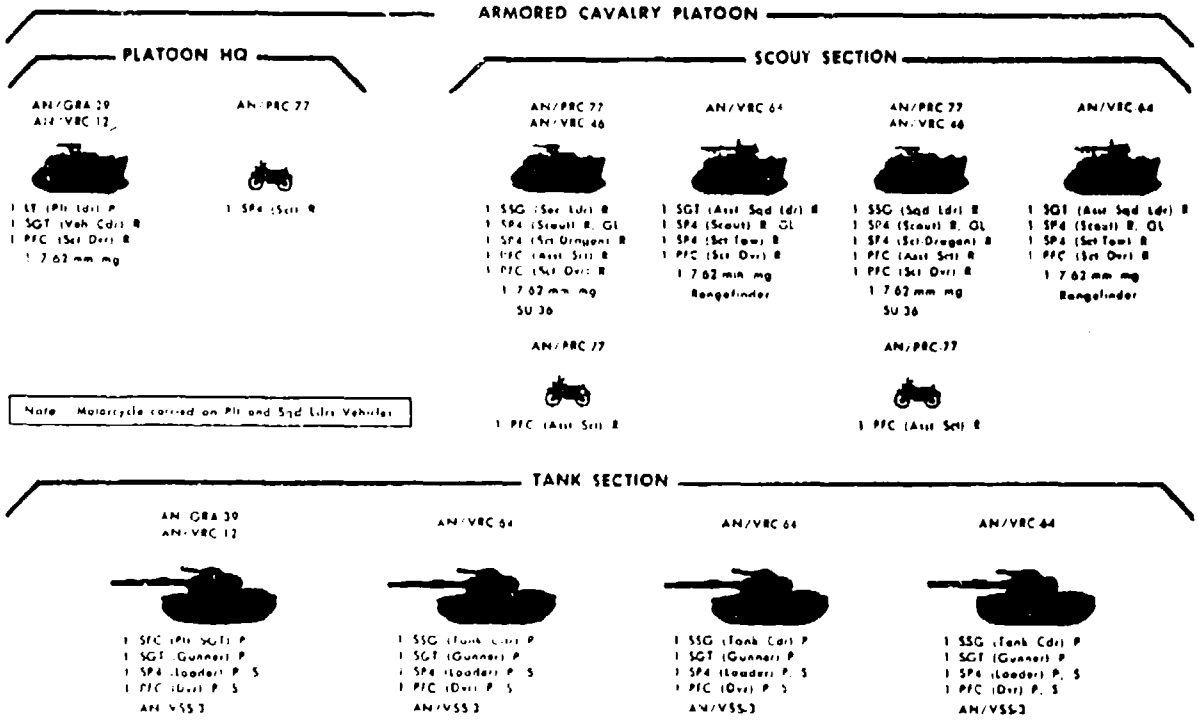


FIGURE 17 - Divisional Armored Cavalry Platoon, cira 1977.

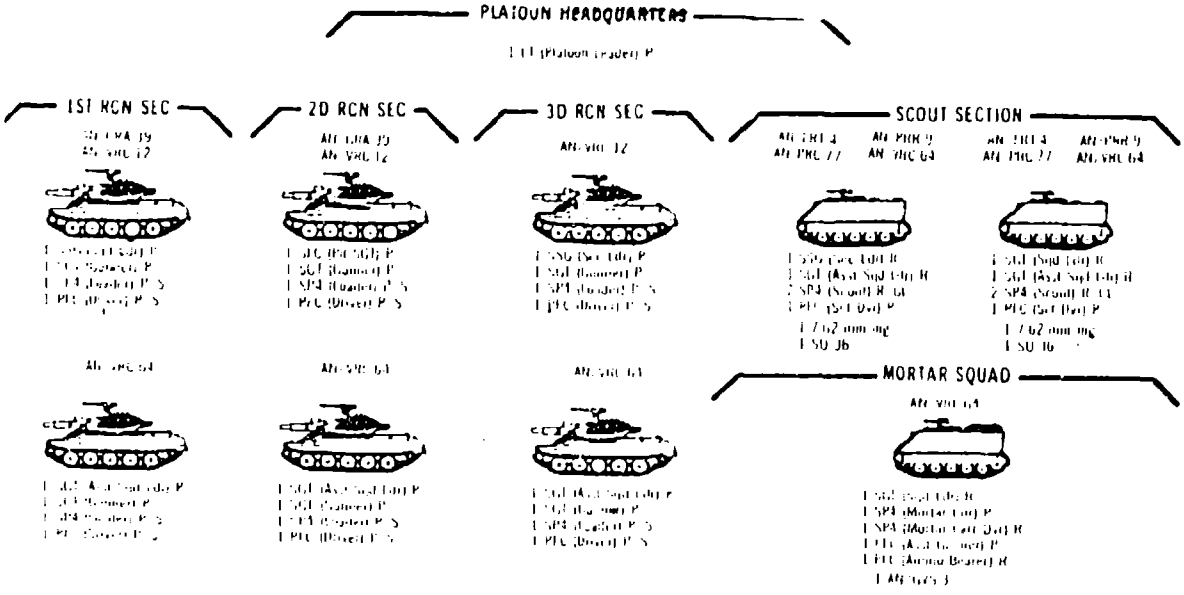


FIGURE 18 - Regimental Armored Cavalry Platoon, USAREUR MTO&E, cira 1977.

The armored cavalry regiments in Europe went even further with their MTO&E (fig 18). The ACR's platoons had six M551 Sheridans formed into three recon sections of two vehicles each. The 152mm Shillelagh missile it fired had a 3000 meter range like the TOW, but like a WWII tank destroyer, the M551 had no armor to speak of. With a single scout section/squad of two M113s, and its mortar, the platoon was optimized for long range combat in the covering force area. The closest relative to this cavalry squadron was the tank destroyer battalion of WWII which had an organic recon company and three TD companies. Both were light in armor, but ideal for killing tanks.

In each of these three cavalry organizations, the presence of a separate overwatch/support or counterreconnaissance element other than the scouts stands out. Also, that to replace the dismounts of the rifle squad, the new scout squad required more men. The cavalry M113 averaged five scouts, while the maneuver battalion M113, authorized three and was lucky to keep a driver and TC in each of its vehicles.

BATTALION SCOUT PLATOON 1976-80

THREAT - The Group of Soviet Forces, Germany (GSFG) became the yardstick for measuring the threat. Its motorized rifle and tank divisions were equipped with some of the most modern Soviet weapons systems. The T-64 and T-72 tanks were introduced and begin replacing T-62s, which in turn replaced T-55s that were withdrawn. The ratio of BMP to BTR-60 formations increased, and both types of division organizations moved towards an increasingly combined arms profile. The BRDM-2 armored car remained the primary recon vehicle, but it was now supplemented with a reconnaissance version of the BMP (replacing the PT-76 light tank) and the introduction of medium tanks into the reconnaissance battalion of the division. HIND-A, then HIND-D attack helicopters appeared in increasing numbers. The proliferation of antiarmor weapons in the motorized infantry continued, with the AT-3 SAGGER common throughout his forces. The perceived need to meet this threat head-on in great part drove the upgunning of armored cavalry and the scout platoons.

TACTICAL FLEXIBILITY - The headquarters and two scout section organization had not changed with the upgunning effort. The need for massing the available firepower, usually caused the scout platoon to operate as a ten vehicle combat force, yet there were no battle drills similar to those developed and practiced by the cavalry of the era. While a TOW vehicle was teamed with a Dragon vehicle to form a mixed scout squad, the TOW-equipped scout section was often used as a separate antitank reserve. This meant that no more than six M113s and 18 scouts were used in the recon role. Maintenance problems or personnel shortfalls would reduce the number of available vehicles and scouts to a significantly smaller number. The elimination of the doctrinal Combat Outpost Line (COPL) in 1977 was intended to increase flexibility in providing security during the Active Defense.

What occurred in fact was that the task force scout platoon, usually alone, would meet the approaching threat from its frontal screen line, initiate antitank fires with its TOWs and Dragons, and finally withdraw to a flank screen or battle position in depth to continue to use its TOW systems.

COMMAND, CONTROL, & COMMUNICATIONS - The separation of the headquarters and scout sections remained a distinct advantage. The scout platoon still had the same (by now ancient) VRC-12 series FM radios and Vietnam era crypto equipment. PRC-77s were authorized for dismounted operations. The scout platoon made internal C2 easy since it tended to move as a single entity like a cavalry platoon. The resurgence of NCO proficiency began through the NCOES program and the introduction of the skill qualification test, soldiers' manuals, etc. As a result, NCO vehicle commanders required the necessary map reading and land navigation skills to command & control squads or sections operating away from the main body of the platoon. However the perceived doctrine and tactical needs usually precluded this.

STANO EQUIPMENT - The scouts retained their binoculars, observation scopes, and night vision devices. The addition of the TOW provided an additional long-range optic. This version of the scout platoon also retained a portable mine detecting capability. The battalion still had four AN/PPS-5 GSRs in a separate section, but the combat focus of the tracked scout platoon insured the widest possible gap in coordinated action with the jeep & trailer combinations of the GSR section. Lastly, the surveillance potential of dismounted scouts was almost nil. The M113 would normally keep two scouts mounted, the driver and commander, leaving one scout available to dismount, The squad could only dismount two scouts (FM 17-95 stressed a minimum of two), yet their cavalry scout squad counterpart, with ten men, could dismount from 4-6 scouts under similar conditions. In 1979, C16 to TO&E 17-35H deleted the battalion GSR section, transferring those assets to a divisional CEWI battalion.

MOBILITY - The replacement of the M114A1 ACRV with the M113A1 APC provided the platoon with a definite plus in terms of mobility. Even the pedestal-mounted TOW in the M220 did not add enough weight to adversely affect its ability to keep up with the M113 and the M60 series tank. The M113 also provided the entire platoon with an amphibious capability. However with the new M1 Abrams tank and the M2 Bradley infantry fighting vehicle on the horizon, the need for a new scout vehicle was recognized.

CONCEALABILITY & STEALTH - The M113 is about as quiet as tracked vehicles come, but never provided true stealth. Moreover it was larger than most counterpart vehicles in NATO, like the M113 1/2 C&R (Lynx) vehicle used by Canada and The Netherlands, the SPZ 11-2 used by West Germany, or the Scorpion used by Great Britain.

This was the first time that maneuver battalion scouts shared a common vehicle with mechanized infantry. The concept of commonality stressed the difficulty an opponent would have in identifying whether a vehicle were part of a reconnaissance or other combat unit, hence contributing to OPSEC. Finally, the TOW-CAP on the M220, when fully raised, was not easily concealed.

WEAPONS & LETHALITY - The presence of TOW and DRAGON gave the platoon an excellent heavy and medium AT capability, which far exceeded what was actually required for reconnaissance in a battalion task force which had tanks, mech infantry, and TOW antitank elements. The platoon had ten .50 cal and nine M60 machineguns to conduct recon by fire or suppression (the ATGMs could do neither). In fact, the platoon was too weapon heavy with nineteen machineguns and eight antiarmor weapons for a mere 30 scouts. The presence of this firepower did much to limit dismounting even when the platoon was at or near full strength, as the scouts felt obligated to man these potent weapons to counter perceived mounted threats.

SURVIVABILITY - The scout M113 provided the same level of protection as the infantry APC. The heavy machineguns (14.5mm) and light automatic cannons of the threat put the M113 at risk. There was no special NBC or countermine protection, no reactive or spaced armor, no kelvar spall liner. The scouts generally operated with all hatches open to increase their visibility and target acquisition capability. The driver, commander, and observer operated partially exposed, but body armor was provided. In 1975, a computer-based study, HUNFELD II, showed that Soviet threat artillery preparation would be extremely lethal to M113s and M551s. The exposure of the TOW gunner to artillery fire drove the adoption of the TOW-CAP, a multi-layered, kelvar cover, but this was never tested in combat.

LOGISTICS - The M113 eased the maintenance situation in the platoon in terms of higher operational ready rates and better supply of repair parts due to commonality with other battalion APCs. The use of TOW and DRAGON in combat would have stressed the combat support company to keep the platoon supplied with ammunition, especially if it were used as an antiarmor element. Another problem was the TOW battery. Without batteries, the TOW weapons system would not work. The combat support company maintenance section had a battery charger that was developed to run on 110 AC power. In USAREUR, a transformer (not authorized) was needed to adapt 220 AC current, or a generator and inverter-vibrator were needed to make the system work. A troublesome problem, it had nothing to do with recon or surveillance.

ERRATA - The GSR section departed for the new divisional CEWI battalion with Change 16 to the H-series TO&E. The remaining 30 scouts represented 5% of the 550 soldiers in the tank battalion, 7 1/2% if the GSR section was factored in. Dismount capability was the lowest of any of the previous scout platoon variants!

PERCEIVED OR ACTUAL SHORTFALLS & DEFICIENCIES

1) Platoon lacked dismount strength.

2) The M113 did not match the mobility of the incoming M1/M2 series vehicles.

3) The M113 lacked survivability.

4) The pedestal mounted TOW was too vulnerable to artillery fire and had too slow a rate of engagement.

5) The fact that the platoon was too weapon heavy was not seen as a problem; simply tighten the discipline of the scouts so they wouldn't use the weapons unless needed.

THE STUDIES & SCOUT PLATOONS THAT NEVER WERE

The latter half of the Seventies produced a wealth of study efforts. With our doctrinal, organizational, training, and materiel efforts focused on Vietnam for so many years, the Soviets had closed the technology gap in many areas. Post-conflict combat development efforts sought to regain our lead. How close the Soviets had come in many areas was amplified by the lessons learned from the results of the Arab-Israeli War of 1973.

The US Army Armor Center formed the Cavalry/Scout Ad Hoc Committee (CSAC) in March 1973 and it met through June 1974. It merged the essence of the lessons learned in Vietnam with those from the Middle East. Although no detailed analysis was made of the battalion scout platoon organization, the study inferred that findings on the the armored cavalry scout vehicle (and) crew were applicable to any manevuer battalion scout requirements. Among the findings of the CSAC were: (my comments in parenthesis)

- A scout vehicle must have mobility equal to or greater than the main body. (True)

- Increased Threat antiarmor capabilities required increased levels of armor protection. (Not true! Maneuver battalion scouts primary means of survival is by stealthful movement and passive surveillance from concealed positions).

- Five scouts on a vehicle are needed for sustained operations. (Partially true. While 5-6 scouts are the smallest group which can perform most collective tasks in a CONOPS environment, THEY DO NOT HAVE TO BE ON THE SAME VEHICLE. I suspect our Vietnam ACAV experience affected this finding.)

- Increased Threat armor required an antitank capability on scout vehicles. (Not true! If antiarmor capability was required by scouts, then the TO&E should have added tanks or TOW vehicles crewed by 19E armor crewmen or 11H direct fire antiarmor specialists. The facts as stated in the 1966 ARSV Study or by the General Board in 1948, had not changed.)

- Night surveillance and fighting capability were mandatory. (True.)

A second study which was important in the development of scout organizations and doctrine in the post-Vietnem period was the Armored Reconnaissance Scout Vehicle (ARSV) Task Force which met from July 1974 to July 1975.

Two primary contenders as the ARSV were the XM-800 ARSV-Tracked and the XM-800 ARSV-Wheeled, each considered as a replacement for the M114A1, as well as a host of other vehicles (e.g. XM-311). None was selected in the end mainly because of funding problems with Congress.

The ARSV program was cancelled in November 1974. The Army had suffered through the M551 Sheridan AR/AAV, the MBT-70 tank, the Cheyenne attack helicopter, and Congress was in no mood to fund future odysseys into the twilight zone of combat developments. As a compromise solution, the M113 APC would be product improved to meet the needs of the next generation of scout vehicles in the near term.

The ARSV TF accepted the CSAC conclusion on crew size, and stated that the recommended follow-on scout vehicle (then MICV, later the IFV/CFV) for the armored cavalry also be the scout vehicle used in the maneuver battalion scout platoon. HQ DA followed suit, accepting a reconfigured IFV as the CFV and also designating it as the battalion scout platoon vehicle.

In May 1976, TRADOC launched its Division Restructuring Study (DRS).

> The DRS planners had presented the rationale and concept for a restructured division to the Army Chief of Staff in July 1976. Its main ideas were striking. Many, but not all, would be taken up by the Division 86 planners. The DRS concept called for smaller companies and smaller but more battalions to better manage increased firepower. Single-purpose companies were prominent, including a TOW company in each battalion (tank and mechanized). The arms would be combined and combat actions coordinated at battalion level, not company. More artillery tubes would support the added manevuer elements and the new artillery missions ushered in with the cannon-launched guided projectile, scatterable mines, dual purpose improved conventional munitions, and tactical smoke. 30

Many of the changes proposed were radical. As for the maneuver battalion scout platoon, the continuous turmoil in missions and organizations throughout its history led some to question what its actual purpose was or if it were needed at all?

Field tests for the DRS organizations were conducted at Fort Hood in late 1977. Among the organizations tested were the three maneuver battalion scout platoon options shown in (Fig 19). In Option One, the platoon was eliminated at battalion level and replaced with a brigade scout platoon of five M113A1 APCs and two motorcycles. Option Two provided three motorcycles and three jeeps to a greatly reduced battalion scout platoon with a total of nine scouts. The Third Option consisted of three motorcycles and three M901 Improved TOW Vehicles (ITVs) with twelve scouts.

The results of the DRS field tests confirmed the need for scouts in the battalion, and that each of the options examined was too austere to accomplish the tasks expected of the platoon. In these cases, the results confirmed what should have already been accepted fact!

5.a. Scouts. All scout organizations tested were inadequate. A larger maneuver battalion scout platoon is recommended to provide the commander real-time information, reconnaissance, and security. The preferred organization is nine scout vehicles with rapid firing, tank-suppressive weapons systems organized into two sections of four squads each. The platoon headquarters is mounted in the ninth vehicle. Each squad includes four scouts. The platoon sergeant is carried in any vehicle designated by the platoon leader. Total strength of the platoon is one officer and 37 enlisted personnel. 31

11.a. Brigade Scout Platoon. A scout platoon at brigade level is a viable concept. During field operations, the platoon was used extensively to assist with command and control functions. The platoon's size, in both personnel and equipment, is inadequate for effective performance of traditional scout missions--reconnaissance and security. The preferred organization of the platoon is a platoon headquarters and two scout sections, each section consisting of three scout vehicles and nine men. 32

Two observations can be drawn from the above. First, the DRS analysts believed that the maneuver battalion scout platoon required a greater robustness, especially in personnel than it had in the H-Series or any DRS varient. Second, the brigade scout platoon performed mostly C2 assistance, like the old scout section of the brigade under the ROAD reorganization and G-series TO&Es of the 60s, of which most tasks could be performed by MPs.

Far before the DRS results were known, another study team "picked up the baton and drove on." On 10 December 1976, HQ DA tasked TRADOC as a part of the IFV/CFV COEA to conduct a mission analysis of the CFV within the mechanized infantry and tank battalion scout platoons. The USAARMC's Directorate of Combat Development (DCD) passed the tasker to The Scenario Oriented Recurring Evaluation System (SCORES) Branch.

They published their findings in the (U) Battalion Scout Study (U) dated 14 May 1978. Much of the specific mechanics of the process was classified CONFIDENTIAL, however once again, the methodology lacked a full front end analysis of the battalion task force and its mission requirements.

Given a bottom up, rather than a top down approach to the analysis, the results can and were skewed with errors. An example of this is Table 5, Mission Accomplishment Comparative Analysis, shown on page 74.

FIGURE 19A - Option One (DRS). No scout platoon at the battalion level. Mixture of motorcycles & M113s at brigade level.

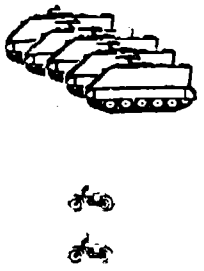


FIGURE 19B - Option Two (DRS). Scout platoon at battalion level with motorcycles & jeeps.

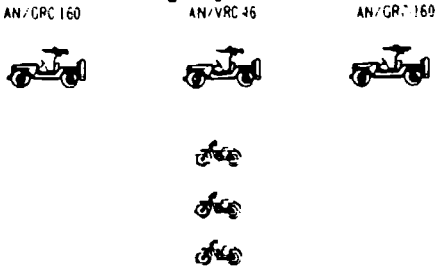


FIGURE 19C - Option Three (DRS). Bn scout platoon composed of motorcycles & M901s.

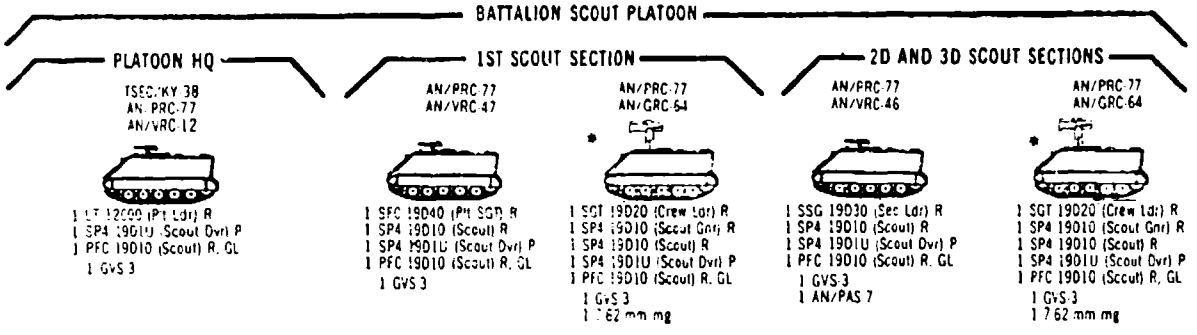


FIGURE 20 - Compromise scout platoon. Proposed version had the M113 ACCV w/ 20mm cannon, but this vehicle was never purchased. Some maneuver battalions adopted this interim TO&E in the early 1980s.

(U) TABLE 5 Mission Accomplishment Comparative Analysis*

Unit/Equip	Frt Scrn	Def	Flk Scrn	Rte Rcn	Maint Cntct	Area Rcn	Rcn Town	Zone Rcn	FINAL RANK
Base Case 6x M113 & 4x M113TOW	4	3	3	5	4	3	3	5	2nd
Alt #1 6x M3 CFV	5	5	5	3	5	5	5	3	1st
Alt #2 4x M113 & 2x ITV	3	3	3	3	3	4	4	2	4th
Alt #3 3x ACCV & 3x ITV	4	4	4	3	4	4	4	3	2nd
Alt #4 6x ACCV	2	1	2	3	3	4	3	2	5th

* Missions: Frontal Screen, Defend, Flank Screen, Route Recon, Maintain Contact, Area Recon, Recon a Town, and Zone Recon.

Data Element: 5 - Most complete mission accomplishment.
Discription 4 - Mission accomplished w/additional benefits.
3 - Mission accomplished.
2 - Mission mostly accomplished.
1 - Mission not accomplished. 33

This study looked at two product improved M113 series vehicles. An armored cavalry combat vehicle or ACCV was a modified M113 with a small turreted 25mm cannon which was not stabilized. The second was an "improved TOW vehicle" or ITV which became the M901 with an armor protected TOW launcher which can be elevated to fire from defilade.

What I find most interesting is that the ten vehicle base case being challenged accomplished all of the missions and was the best at route and zone reconnaissance! Furthermore, the six ACCV alternate performed the worst, compared to the six CFV alternate ranking first. Now the only real difference that could be simulated between the two vehicles is the presence or lack of the TOW missile. This test, regardless of the mission profile, seems too skewed in favor of the best antiarmor fighting system, not the best scout system!

Using a number of other measures of effectiveness, the final rankings in the Scout Platoon Study's are shown here:

(U) TABLE 6 - Relative Ranking By Measure of Effectiveness (U)

First - Alternative #1 (Six CFVs).
Second - Alternative #3 (Three ITVs & Three ACCVs).
Third - Alternative #4 (Six ACCVs).
Fourth - Alternative #2 (Four M113s & Two ITVs).
Fifth - Base Case (Six M113A1s & Four M113s w/TOW).

(con't)

(U) CONCLUSIONS - The Cavalry Fighting Vehicle equipped battalion scout platoon provides a quantitative and qualitative increase in the battalion scout platoon's ability to accomplish all assigned missions. 34

CPT King's article, "The Scout Platoon is Alive and Well", which appeared in the September-October 1978 issue of ARMOR magazine provides ample detail on the outcome of this particular study. As a member of the study team, he illuminates the alternatives and the final decision. Unfortunately despite his contention, the scout platoon was anything but well!

The same study team was kept on for an additional review and issued its final report in October 1978. Titled (U) Summary Report of Maneuver Battalion Scout Platoon Analyses Conducted in Support of IFV/CFV and ITV COEA's (U), the purpose of this effort was to extract the maneuver battalion scout platoon operational effectiveness from the IFV/CFV and ITV COEAs.

> It validated that scout vehicles require five-man crews; a six CFV organization is more cost effective than the present 10 vehicle maneuver battalion scout platoon; six rather than 10 CFVs per platoon has potential for significant dollar savings in IFV/CFV costs; (and that) M113Als could be redirected into other critical areas. 35

A number of additional variants were examined using SCORES. The scout platoon was pitted yet again against an OPFOR in various security, combat, and reconnaissance missions. The gaming, similar to today's computer models, was attrition based and optimized for direct fire combat. The winner or 'preferred option' generally will be the one with the largest number of most lethal vehicles. It should have come as no surprise then, that a seven vehicle compromise platoon of four Armored Cavalry Combat Vehicles and three M901 Improved Tow Vehicles won as the interim measure of choice (Fig 20).

> It was recommended that TOE variations be submitted for TRADOC/DA approval allowing reorganization of mech and armor maneuver battalion scout platoons to a six CFV vehicle/30 personnel configuration; that a TOE variation provide for an interim platoon configuration (four ACCVs and three ITVs) in anticipation of CFV fielding; and regardless of the final decision concerning the CFV program, the recommended seven vehicle battalion scout platoon configuration is equal to or more cost and operationally effective than all other platoon configurations evaluated. 36

Some scout platoons converted to this interim TO&E briefly. less the ACCV which was never fielded. In those platoons, the basic M113 remained as a substitute, coupled with the M901 ITV. Most converted platoons fought to keep their seventh vehicle during the transition to DIVISION 86, but lost as I cover in the next chapter.

As the Seventies came to a close, the Army was in the process of changing yet again. Dissatisfaction with the doctrine of Active Defense refired interest in doctrine and a possible reorganization to maximize the effects of emerging technology. TRADOC began the DIVISION 86 reorganization study in 1978, concurrent with the development of a new doctrine geared to fight the "Central Battle", which would evolve into AirLand Battle.

Much of the initial work was built on the results of the DRS field tests. In the TRADOC history of DIVISION 86, Mr. Romjue writes that scouts were required at both brigade and battalion levels and that the most effective scout organization was about six cavalry fighting vehicles. This was obviously derived from the USAARMC Scout Platoon Study effort.

TRADOC Pamphlet 525-4, HEAVY DIVISION OPERATIONS 1986, Dec 1980, initiated the series of operational concept documents that would drive the doctrine and organization changes under AirLand Battle. The actual operational concept for AirLand Battle appeared in TRADOC Pamphlet 525-5 published in March 1981.

In concert with these, USAARMC had published the Operational and Organizational Concept - Division and Corps 86 Cavalry, in October 1980. The ACR was not radically affected. Keeping its basic structure of squadrons and troops, only the combined-arms cavalry platoons within the troop had disappeared. In their place were two pure-scout and two tank platoons, coupled with a troop headquarters and mortar section. Here was a return to the combined-arms concept at the troop level, dormant since the failed ROCAD experiment of 1957.

The divisional squadron underwent the greatest transformation, losing its tanks and third ground troop. The result was a 2x2 squadron of two ground troops and two air troops. The aggregate of the two air cavalry troops was roughly comparable to a single H-Series troop, but the ground troops were drastically different in that each had three scout platoons of six CFVs each, a troop headquarters, and a mortar section.

The loss of traditional cavalry capability at the division level would supposedly be compensated by the presence of the three maneuver brigade scout platoons (the equivalent of a third troop), and a number of high-tech sensors which would give the cavalry squadron a greater capability. In fact, the majority of the sensors would never be fielded (SOTAS, REMS, etc), while the brigade scout platoon was a separate story.

A brigade level scout platoon was a response to an existing need; a need which was established before WWII and met by organizational or tactical solutions ever since. In WW II, combat commands normally received attachment of a ground cavalry troop from the division if required. This tactic was usually

applied only to the main effort combat command, with the squadron minus remaining under division control. This concept was retained in the post war period as the division cavalry squadron in the armored division kept four ground troops until the ROAD reorganization in the early 60s.

In the 60s and 70s, the divisional squadron moved to three ground troops and an air cavalry troop. At the brigade echelon, the HHC had an organic scout section, and later an aviation section. The scout section was removed with the change to the H-series TO&Es, while the brigade aviation sections paid the bill in the mid-70s for the formation of a full division aviation battalion, replacing the single aviation company.

In the Seventies, the division armored cavalry squadron was usually employed as an elite maneuver battalion, not only as a result of our Vietnam experience, but also because it supported the needs of the Active Defense. As a result, the brigades went wanting.

The DIVISION 86 brigade scout platoon was supposed to be the fix. Instead, it too was deleted as an "Army Of Excellence" billpayer. The bottom line was that the divisional squadron had less capability than ever before to cover all the requirements.

When the smoke cleared, the battalion scout platoon emerged from the DIVISION 86 effort with a TO&E common to that of the cavalry scouts of the divisional squadron and ACR. This was the first time since the 1948-56 period that true commonality existed across all of the echelons, but was that what was really needed? The new combat training centers would help provide insights on the answer.

AIRLAND BATTLE, DIVISION 86 TRANSITION & ARMY OF EXCELLENCE

Unfortunately, AirLand Battle operational concepts and organizations were published well before much of the new materiel being developed to implement them was available. Furthermore, there was a lack of specific doctrine implementing AirLand Battle in the early 1980s. At higher echelons, a set of briefing slides and the usual bag of buzzwords may have sufficed, but battalions, companies, and platoons in the field suffered.

A classic example was the tank and mechanized infantry battalion task force field manual. The 1977 version of FM 71-2 stressed the Active Defense, so it was obsolete. For a variety of reasons, a new manual was not published at the DA level in the early Eighties. In a space of less than three years, five battalion-echelon manuals were bogged down in the TRADOC Doctrinal and Training Literature Program:

TT 71-2J The Mechanized Infantry Battalion Task Force, 1982.
TT 71-1/2 The Abrams Battalion, Division 86, 1982.
FM 71-2 The Tank and Mechanized Infantry Battalion Task Force (Final Draft), June 1983.
FM 17-17 The Division 86 Tank Battalion/Task Force (Coord Draft), Dec 1983.
FM 71-2J The Tank and Mechanized Infantry Battalion Task Force (Coord Draft), Dec 1984.

The first two were training texts published to serve the immediate needs of the proponent schools until a new FM was fielded. The remaining three represented limited editions of drafts. None of these was a fully coordinated product, nor were they available through the Army's publications system. In 1987, as the S-3 of a M1 equipped tank battalion in USAREUR, my requests for copies of the tank battalion doctrinal manual were being filled with FM 71-2 from a decade earlier.

Fortunately, the interim organizations did not mirror this chaos. The new armored division variant under DIV 86 still had six tank battalions, but now only four mechanized infantry battalions. Each mechanized battalion had four mechanized companies (13x M2 IFVs each) and an antitank company (12x M901 ITVs). Each tank battalion had four tank companies of fourteen M1 Abrams tanks each. Both the tank and mech battalions shared a virtually identical HHC organization which included the heavy mortar platoon (2x FDCs & 6x 4.2" mortars) and the newest version of the scout platoon.

Since the M2/3 was just completing operational tests in the early 1980s, and was not expected to be fielded until FY 1983, an interim or transitional TO&E for the scouts took effect. The scout platoon stayed at a total strength of thirty; consisting of three sections, a headquarters section and two scout sections (Fig 21). Each section contained a M113 and a M901 ITV along with ten scouts.

M113/M901 SCOUT PLATOON

ORGANIZATION.

The scout platoon comprised of three M113s and three M901s is organized into a platoon headquarters and two scout sections. The platoon headquarters consists of the platoon leader on the M113 and the PSG on the M901. Each scout section has an M113 and an M901; this balances firepower and maneuver capabilities. The PSG and squad leaders are equipped with the vehicle that provides the greater overwatch capability (see Figure D-2).

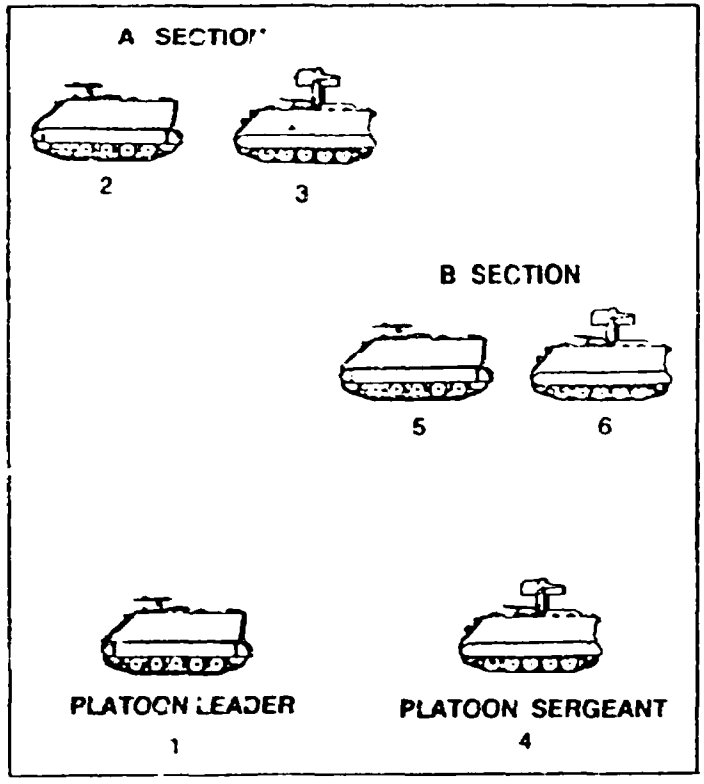


FIGURE 21. DIV 86 Transition Scout Platoon, 1983.

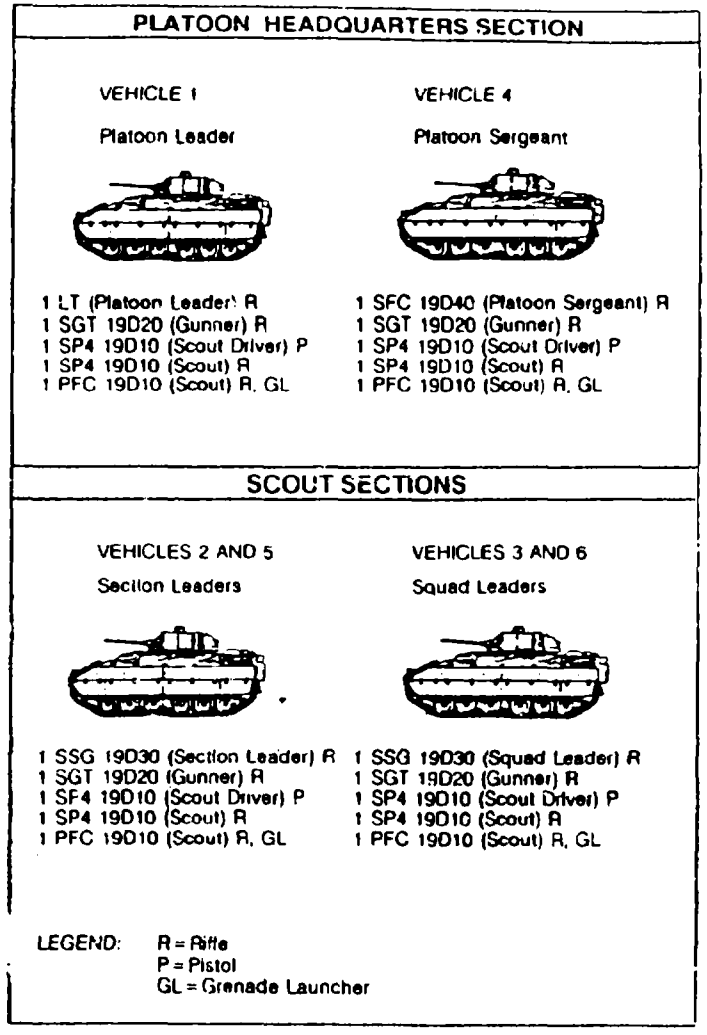


FIGURE 22. Army of Excellence Battalion Scout Platoon, 1987.

SCOUT SECTIONS.

The scout sections are each made up of a section leader, a squad leader, and their crews manning two CFVs.

It is probably a safe bet to state that this was by far the worst of the TO&Es forced on the maneuver battalion scouts to date. Neither of its vehicles was a true reconnaissance/scout vehicle. The ITV was exceptionally overcrowded with five authorized scouts and platoons would usually move a scout to the companion M113 unless personnel shortages took care of the problem.

The M1 equipped tank battalion had to contend with a mobility differential with its scout platoon. Still, this was not as significant as the noticeable difference in speed between the M113 and overburdened M901. Furthermore, the operational readiness of the M901 was low due to the complexity of the TOW "hammer-head" elevated launcher. This meant that fewer than six scout vehicles available was the norm!

While the platoon was capable of dismounting a greater number of scouts than its immediate predecessor under the H-Series TO&Es, it also suffered from the fact that the headquarters section represented one third of its reconnaissance and security capability. In response to one of the "strengths" of the DIV 86 model, specifically a higher leader to led ratio, the drafters of the scout platoon TO&E returned to the WWII model which required the PL/PSG to conduct concurrent C2 and CSS coordination while participating in actual scouting tasks. Though it can be done, the quality of each task suffers accordingly, and in crisis situations, some tasks fail to be accomplished at all.

The fielding of the M3 Cavalry Fighting Vehicle, did little to correct this, except that the M901 was gone! The M3 CFV was larger than the M113 or than any scout vehicle heretofore, including the M3/M5 Stuart light tanks in WWII. Almost as big as a main battle tank (in fact it was higher than the M1 tank), the CFV was also exceptionally noisy. Recall the desires of the post WWII studies to silence the M24 light tank.

The M3 CFV had its strengths, primarily firepower, target acquisition, and the ability to keep up with the M1 tank. It was praised for its commonality with its mechanized brother. It's firepower, slaved to a thermal sighting system, was just exactly what every cavalry scout needed . . . but not necessarily every maneuver battalion scout.

In fact, the CFV was just that, a CAVALRY FIGHTING VEHICLE. What was really needed was a (maneuver battalion), scout/recon vehicle, but the impetus for fielding the CFV was too great.

Turning to how the CFV equipped scout platoon was to function, FM 71-2J Tank and Mechanized Infantry Battalion Task Force in 1984 provided the first appendix dedicated to the scout platoon since FM 17-15 in 1966. What was interesting is that given the fact that AirLand Battle was so "new and different", the mission and capabilities statements for the scout platoon remained amazingly unchanged!

> . . . the scout platoon performs reconnaissance and security for its parent battalion and assists in the control of movement of the battalion and its subordinate elements. (con't)

The scout platoon has the following capabilities:

a. Conduct zone, route, and area recon.
b. Screen one flank, the front or rear of the Bn/TF.
c. Conduct liaison.
d. Provide contact parties.
e. Perform quartering party functions.
f. Provide traffic control & road guides.
g. Conduct limited pioneer & demo work.
h. Conduct chemical detection and radiological survey & monitoring operations.
i. Participate in area damage control ops.
j. Establish a roadblock.
k. Act as part of an advance, flank or rear guard.
l. Establish observation posts.
m. Provide security for the command post or command group. 37

The remainder of the section is dedicated to an abbreviated "how to" for scouting. Stealth is stressed, but dismounting is not mentioned. The M3 CFV provided many things but stealth was not one of them! In a paragraph on reconnaissance by fire, the CFV mounted scout is seen doing the shooting as well as the observing. Likewise, the platoon could prepare three OPs for extended periods, if the headquarters section manned one of them. This provided sufficient personnel for dismounted patrols between the OPs, but no organic means of supporting the OPs with a reaction force during a screen mission. Six OPs could be manned for short periods, but this required the CFVs to move individually on the battlefield (e.g. no overwatch vehicle).

If the task of counter-reconnaissance could not be fulfilled by indirect fires, the OPs themselves had to engage enemy recon units. While not desireable there was no other choice, despite the manual's caution that scouts manning observation posts do not fire their weapons except to defend themselves or cover their withdrawal.

In a paragraph on using scouts in the offense, prior to the battalion crossing the LD, the scouts are to reconnoiter the objective area, <u>if possible</u>. If they, or some other asset from the task force, have not conducted the reconnaissance, the success of the attack is questionable. Yet, infiltration by M3-mounted forces is virtually impossible. Once the battalion crosses the LD, the scouts may be kept to the front of the task force to continue to reconnoiter. Previous manuals cautioned against the possibility of the scouts being caught between the enemy and friendly maneuver forces, yet this is not discussed. Of course, the scouts could always 'screen a flank', or provide rear area security and assist in the evacuation of prisoners of war.

One new aspect, however, was the paragraph entitled, "Operations with Attached Tanks and Infantry" (L-31). It cited the tactic of attaching either a tank or mechanized platoon to the scouts, but did not fully examine the pros/cons and other considerations.

FM 17-98 The Army 86 Scout Platoon was published in November 1985. Because the six CFV platoon was now common at all levels from the maneuver battalion scout platoon to the armored cavalry regiment, this manual sought to answer the needs of all scouts. It failed. Within months of its release, it was clear that it was heavily oriented on scout platoons in cavalry units and strongly emphasized the combat role of the scouts. A quick rewrite was directed.

FM 17-98 Scout Platoon, released in October 1987, corrected a lot of the problems doctrinally. Up front, the platoon's primary missions were limited to reconnaissance and screening in support of its parent unit (read Bn/TF or cavalry troop). Under capabilities, many ancillary requirements were gone, but remaining was:

- conduct liaision.
- perform quartering party duties.
- provide traffic control.
- conduct chemical detection & radiological survey/monitoring operations.
- conduct limited pioneer & demolitions work.
- participate in area security.

Most important was the paragraph on limitations which followed. It recognized that the scouts operate as a part of a larger combined arms force, whether supporting maneuver battalions or cavalry. Additionally, limitations were:

- platoon limited to reconnoitering a single route.
- platoon reconnoiters a zone 3-5 kms wide.
- during screen, platoon is limited in its ability to destroy or repel enemy recon units.
- during counter-recon operations, ...it must be augmented with infantry and/or armor to provide a destruction force to kill the enemy's recon elms.
- platoon mans 6x OPs (under 12 hrs) or 3x OPs (over 12 hrs).
- scouts radius of action is limited by commo ranges.
- scouts cannot operate continuously on Bn/TF cmd, O&I, A&L, mortar, and internal plt net. The PL can monitor only two nets!

The manual talked to the specific requirements placed on both battalion scout platoons and scout platoons of cavalry units. The battalion scouts were once again seen as the eyes and ears of the task force. Their primary mission was to confirm or deny the commander's Intelligence Preparation of the Battlefield (IPB). Later in the reconnaissance chapter, dismounting is stressed. Reconnaissance by fire received two full pages discussing the pros/cons and techniques for both indirect as well as dismounted and mounted direct fires.

Likewise, screening missions were treated thoroughly, with five critical tasks noted:

- Maintain continued surveillance of all NAIs or high speed avenues of approach into the screen.
- Provide early warning of enemy approach.
- Gain and maintain enemy contact & report enemy activity.
- Identify, and in coordination with other combat elements, destroy enemy reconnaissance units.
- Impede and harass the enemy by controlled use of artillery fires.

In a significant change from the Vietnam and Active Defense periods, the scouts finally received doctrinal guidance which seemed consistent with the doctrine learned in WWII and the period immediately afterwards:

> Scouts maintain surveillance from a series of OPs along a screen line or in depth. They conduct active patrolling to extend their observation or to cover dead spaces and the area between OPs. Unless they have to, scouts do not fight with their direct-fire weapons when executing a screen mission. Indirect fire is their primary means of engageing the enemy. They use their direct-fire weapons primarily for self-defense. 38

The term "counterreconnaissance" also returned for the first time since the 1950 version of FM 17-22. Its new definition was:

> Counterreconnaissance is the directed effort to prevent visual observation or infiltration of friendly forces by Threat reconnaissance elements. 39

Counterreconnaissance is equally applicable to maneuver task forces, regimental or divisional cavalry. The scout platoon may conduct a screen mission to acquire and identify threat recon forces, but additional combat forces are usually tasked to assist in defeating the Threat's reconnaissance effort.

Four tactical techniques are given. First a tank platoon may be given to the scouts. Second, a company/team may be given the forward screen role (similar to the old COPL). Third, a company/team may provide a reaction force to assist the scout platoon. Finally, the scouts may be required to defeat the enemy reconnaissance by themselves. THIS IS THE LEAST DESIRABLE OPTION!

As good as the 1987 version of FM 17-98 Scout Platoon was, it was not fully supported by the 1988 version of FM 71-2 The Tank and Mechanized Infantry Battalion Task Force. In the latter text, the scout platoon received scant consideration in scattered bits and pieces throughout the text, similar to FM 17-33 from WWII. Reconnaissance and counterreconnaissance are mentioned, but all reference to the tactics, techniques, and procedures was eliminated.

DIV 86 (TRANSITION) & AOE SCOUT PLATOONS 1981-89

THREAT - The Threat has improved his major weapons systems with new generations arriving every half-decade. The BMP-2 with its 30mm cannon and AT-5 SPANDREL ATGM are superior to the older BMP-1. The T-80 and upgraded versions of the T-72 and T-64 place many of NATO's KE tank rounds and HEAT munitions into obsolesence. Today's scout must also deal with the threat from HIND E/F or HAVOC attack helicopters, with long-range ATGMs. Directed Energy Weapons have been developed and may shortly be fielded in quantity. Yet it is important to note that most of their front-line reconnaissance and counterreconnaissance is still accomplished mainly by soldiers, primarily by motorized riflemen or reconnaissance specialists. They may have the latest small arms (AK-74s)and night vision sights, but the small war of patrols and OPs has not changed significantly since WWII; especially since neither sides' technology has provided a distinct and completely overwhelming advantage.

TACTICAL FLEXIBILITY - The three section, six vehicle platoon had less tactical flexibility than many of its predecessors. With five (or less) scouts present per CFV, dismount strength is still exceptionally low. The ability to mass dismounts for special missions is virtually nil. With only six vehicles in the TO&E, the loss of one or more to maintenance or in combat severely stresses the platoon's ability to support the battalion task force. The platoon does not have the assets to concurrently perform ancillary tasks with reconnaissance or security missions. In fact, NTC results show that the lack of vehicles oft times means that the scouts must be reinforced with other combat assets just to OP the battalion's frontage let alone perform counterreconnaissance.

The platoon may man up to six OPs for short periods (<12 hrs), but is limited to only three OPs for longer periods.

The scout platoon lacks a distinct division of responsibilities. Each CFV and crew must be able to conduct stealthful reconnaissance, but may also be the supporting/ overwatch element employing its 25mm cannon or TOW ATGMs. While this ensures versatility, the CFV scout becomes a "jack of all tasks" and master of none.

COMMAND, CONTROL, & COMMUNICATIONS - The headquarters section consumes one third of the platoon versus one fifth of its H-Series predecessor. It is expected, doctrinally, to perform as another "scout" section, but has concurrent responsibilities in logisitics coordination and command & control, to include the requirement for the platoon leader to attend orders groups. While a tank platoon leader or even a scout platoon leader in a cavalry troop may fight his vehicle and perform the other leader tasks, the maneuver battalion scout platoon leader cannot accomplish all of these tasks simultaneously.

The CFV still retains the VRC-12 series radios, however a new generation of crypto-secure equipment (VINSON) was fielded in the mid-80s. Each M3 CFV is authorized two radios, one VRC and one PRC (actually a GRC-160) for dismounted use. The PL and PSG retain two net capability mounted through the use of aux receivers.

STANO EQUIPMENT - The scouts continued to use standard 7x50 binoculars, M-49 telescopes, NOD weapon sights and goggles, and thermal sights on the M901 and later the M3. Its sections can each establish a single OP for extended durations, but this is often insufficient to meet the needs of the battalion, even with the extended capabilities of the M3 with thermal sights. The platoon lacks a dismountable thermal device for surveillance with stealth. The UAS-11 will provide this but fielding has been exceptionally slow. Cavalry, not maneuver battalion scouts, are at the top of the priority of issue list.

MOBILITY - The M901 was a disaster compared to its partner, the M113 and even more so compared to the M1 Abrams tank. While the M3 CFV has excellent speed and is comparable to the M1A1, its size, weight, and the fact that it is tracked have limited its effectiveness at the NTC. The CFV is amphibious (on a good day?), but cannot cross bridges with a very low military load classification (MLC).

CONCEALABILIY & STEALTH - In the DIV 86 Transition Scout Platoon, smoke grenade launchers were finally fitted on the M113/M901 series vehicles. The M901 could conceivably hide in defilade and expose only its TOW 'hammerhead', but such terrain is not always readily available. The M113 is not stealthy, but a straining M901 can definitely be heard at a distance. The M3 CFV is big! It is about the size of a WWII Sherman tank and it is higher than the M1 tank. The M3 is noisy! The combination of engine and track noise make movement by stealth impossible. MG Tait, Commandant of the Armor School has said that conducting reconnaissance in a CFV is like doing it in a Winnebago.

WEAPONS & LETHALITY - The M3 CFV provides the platoon with six 25mm automatic cannons, six coax machineguns, and six TOW launchers. The 25mm cannon remains effective against light armored vehicles, while the TOW launcher, firing TOW 2 will remain effective against heavier armored vehicles. The question concerning lethality is how much is needed, against what types of targets, and at what ranges? Until the CFV replaced the M113/ M901 combination, the scouts had no weapons capable of providing effective suppression or support to reconnaissance/security operations. On the other hand, the M3 CFV can perform the same roles as a WWII light tank and tank destroyer, combined. While that may be the optimum combination for a cavalry vehicle, IS IT WHAT A MANEUVER BATTALION SCOUT NEEDS?

SURVIVABILITY - While the M3 CFV is survivable against all small arms, small artillery fragments, and heavy machinegun fire, it remains vulnerable to mines and antiarmor weapons of all classes. The M3A2 will have improved survivability, but still not be invulnerable (and no one should expect it). Dismounted scouts have kelvar helmets and modern body armor. And still, perhaps the 1966 ARSV Study put it best . . ."scouts must accept a certain degree of vulnerability if they are to do their job."

LOGISTICS - The M901 was a maintenance nightmare! The CFV-equipped scout platoon in the maneuver battalion almost requires a mini-LOGPAC of its own to resupply fuel and ammunition. Recovery of the large M3 CFV is not simple, and certainly has progressed far beyond one jeep towing another with a rope.

ERRATA - The ratio of scout to other maneuver platoons changed with the J- and L-series TO&Es to 1 out of 13. The 30 scouts represented 5% of the 577 aggregate strength of the latest M1 or M1A1 tank battalion.

SUMMARY
HISTORICAL SURVEY

1. The WWII reconnaissance platoons ('42 & '44 versions) provided the task force with a very small, totally-reconnaissance oriented unit. Actually, the number of scouts was probably too low. The platoon relied on stealth and the jeep provided that capability. It lacked sufficient communications, automatic weapons for self-defense, and an organic overwatch/suppression/extraction capability. Remember however that the task force had the light tank company for security missions and combat reconnaissance.

2. The post-WWII reconnaissance platoon ('48 version) introduced the general-purpose, utility concept. It had a large support element ("2nd Tier") with light tanks, a armored infantry squad, and a mortar, but no greater scout capability than the version it replaced. Communications had improved and it had sufficient automatic and larger weapons to protect itself. This variant was ideal for cavalry, but provided too many redundencies with equipment or capability available in the task force to be ideal for the battalion. Every scout vehicle still did not have both a radio and a machinegun.

3. The pentomic scout platoons ('57 & '60 versions) tripled the number of trained scouts available to the task force. With every scout vehicle mounting a radio and machinegun for the first time, this variant envisioned the ability to have a scout's "eyes and ears" wherever they were needed. It relied totally on attachments for heavy weapon support (overwatch/suppression/extraction) beyond the capabilities of a pedestal mounted, light machinegun or 3.5" rocket launcher. It stressed stealth, infiltration, and surveillance from concealed OPs. With its third section, it could perform many ancillary tasks (messenger, liaison, radio relay, etc) or provide a "massed dismount" capability equal to a rifle squad. The introdution of the GSR provided the first technological plus in surveillance capability at night. The platoon lacked armor protection and risked easy destruction if discovered.

4. The ROAD reconnaissance platoon ('63 version) was a throwback to the post WWII model. The introduction of the M114 ACRV in the sole scout section began the erosion of stealth during movement, but resolved the problem of "armoring" the scout. With the infantry squad, sufficient dismount capability was retained. The low-density and obsolensence of the M41A1 light tanks, the presence of three MOS's to train, the redundancy of the infantry squad with other task force assets (and the luxury of their presence), and again, the low number of scouts within the task force undid the "cavalry surrogate" at task force level.

5. The G-Series scout platoon ('66 version) doubled the number of scouts from the ROAD reconnaissance platoon. The M114 ACRV still did not provide true stealth and was more difficult to dismount from than a jeep. The platoon relied on attachments for heavy firepower, but now had two machineguns per vehicle (M2 .50 cal and M60 7.62mm), more than ten times the automatic firepower of its WWII ancestor. The lack of the third section limited its tactical flexibility and ability to perform ancillary tasks without decrementing the scout forces available for major tasks. Though every vehicle retained a radio, STANO systems were still very basic until Vietnam provided the technical surge to field large quantities of NODs.

6. The Vietnam modified G-Series TO&E ('68 version) turned the scout platoon into a mini-cavalry organization, from which it has not recovered to date. Its 10 ACAVs and thirty machineguns gave it more firepower than a rifle company! The fifty scouts were doctrinally encouraged to shoot, stealth didn't matter, and dismounting was rapidly becoming a lost art!

7. The early H-Series scout platoon ('71 version) saw the M114A1 with its 20mm cannon move the scout to a different class. Vietnam taught him to shoot and remain mounted. Now he had a light automatic cannon, and became essentially a very small, "light tank". Stealth remained only a concept of relativity. This platoon also suffered the most from the ills of the VOLAR and the Modern Volunteer Army (MVA) programs.

8. The late H-Series scout platoon ('76 version) returned the scouts to all M113 mounts. The primary difference is that only three scouts were authorized per vehicle rather than the five that had manned the Vietnam era ACAV. The Vietnam legacy coupled with active defense's perceived requirements of battle calculus, and a need for extended "self-defense" against a heavily armored Threat, ushered the TOW and DRAGON into the scout platoon. They had become "de facto" tank destroyers!

9. The DRS model scout platoons ('77 versions) were abominations not worth discussing!

10. The J-Series Transition Scout Platoon ('81 version) tried to do too many things at once. Constrained by the cap of 30 scouts, it resolved the dismount capability problem by increasing the number of scouts on each vehicle. This reduced the platoon to an unacceptable number of vehicles (six). The M113 APC chassis continued to make dismounting more difficult than from a wheeled vehicle, and stealth remained an arbitrary and relative term. That one half of the platoon was mounted in M901 ITV "tank destroyers" testifies to our continued misunderstanding of the scout's role in the maneuver battalion task force.

11. Finally, the AOE Scout Platoon ('85 version) mounted up on six M3 Cavalry Fighting Vehicles. Once again there was virtual commonality between the maneuver battalion scout platoon, divisional cavalry scout platoon, and regimental cavalry scout platoon. So what? Each responds to a unique organization with its own set of doctrinal METT considerations. We have commonality for all the wrong reasons. The CFV scout platoon's firepower comes close to a WWII Sherman tank company, but unfortunately so does their signature on the battlefield. The increased requirements for manning the crew stations in the vehicle have reduced dismounts to insignificant numbers, while mounted stealth remains virtually unattainable in the CFV. STANO systems have progressed far beyond Vietnam era NODs, but basis of issue plans keep many scouts, especially those in the Reserve Component (Army Reserve & National Guard) working with the same types of equipment their grandfathers had in World War II.

SECTION III

RECENT SCOUT RELATED STUDIES

From the 1970s onward, combat developers have used computer based models to drive studies concerning new materiel or organizations. With the advent of the National Training Center in the 1980s, another methodology became available for studying current doctrine, organizations, training, or materiel - the focused rotation and trendline analysis.

During a focused rotation a battalion task force or brigade undergoes extensive scrutiny through the use of observers and the ability to review actions after the fact. Both friendly and threat forces are fully instrumented with MILES equipment which simulates direct fire combat.

Trendline analysis occurs when the results of many focused rotations are examined to determine recurring strengths or weaknesses.

Three recent studies, since 1986, have looked into problems surrounding reconnaissance and counterreconnaissance operations in the maneuver battalion task force. They have employed insights from focused rotations and/or trandline analysis in arriving at their conclusions.

The fist of these was the U.S. Army Training Board White Paper 4-86, "Enhancement of Reconnaissance and Counterreconnaissance Techniques". This paper cited doctrinal, training, and organizational deficiencies, but did not find fault with the equipment of the AOE scout platoon or M3 CFV. The report states that the major contributing factor to a lack of reconnaissance and counterreconnaissance success is the lack of operational knowledge on the part of the task force commanders which leads to inadequate unit training and improper employment.

The paper cites shortcomings in FM 71-2J (1984) and FM 17-98 (1985) which I covered earlier, and which in part have been corrected in subsequent versions of the field manuals. Important is that the Board recognized:

> . . .significant organizational differences that give cavalry (scout) platoons more combat power based on the mutual support found within the troop. In addition, TF scout platoons are normally employed as an independent unit, whereas (divisional) cavalry platoons operate within the structure of a three platoon company size unit (troop). 40

The Board goes on to state that few lieutenants become maneuver battalion scout platoon leaders, and that a lack of knowledge on the employment of the platoon should be expected not only on the part of the platoon leader, but also the XO, S-3, and S-2, all of whom probably also lack scout platoon experience.

Under organization and materiel shortcomings, the Board stated:

> Commanders across the board agree that a six vehicle platoon is inadequate to cover the TF front. In addition, the size of the CFV during reconnaissance operations poses a problem but possible replacement vehicles which are currently in the Amry's inventory would not be an improvement. . . .scout platoon leaders consistently complain that radios do not have the capability to communicate over the distances required. (Look) at the possibility of replacing the Bradley with a low silhouette, lightly gunned, low gallons to the mile, high technology optic and sensor equipped vehicle. In the meantime considerations should be given to increasing the size of the platoon to at least nine vehicles or consolidating the assets at brigade level. 41

Finally, the Training Board's paper points out that there was no good definition of what counterreconnaissance was or who the proponent was. It noted that scout platoons, left to their own devices, generally took the entire mission on themselves and would be lost in the initial engagement with an advancing threat.

The Army Training Board report was issued about the same time the Armor School was caught up in its own, Heavy Division Cavalry Study (1986) and thus the issue did not come immediately to the "front burner". However, a hand-picked team with professional knowledge and experience in reconnaissance and counterreconnaissance operations was sent to observe NTC Rotation 87-1.

The USAARMS Report on NTC Special Focus Rotation 87-1, "An Assessment of Reconnaissance and Counterreconnaissance Operations at the National Training Center", February 1987, is perhaps the most definitive document on the problems of the scout in recent years.

Concerning reconnaissance operations, the team noted that reconnaissance operations were more challenging than counterreconnaissance operations. The recon process at Bn/TF level serves to confirm or deny the IPB template of terrain and enemy forces. This process must precede commitment of maneuver forces. Typically it did not, with commanders pushing whatever forces available down a given axis in hopes of success.

They noted that brigades had no organic recon capability, nor did they have the ability to employ divisional or regimental cavalry assets or even benefit from their collateral employment.

They also cited artificialities in that OPFOR scouts are given much more time to recon friendly defenses, while friendly scouts are so limited in time for reconnaissance that many valid tactics and techniques must be ignored to compensate for the lack of time. Their bottom line was that the battalion task force must mount a reconnaissance operation before the battle and that the necessary C2 and support must be given to it.

The problem with communications is examined. Interestingly, task forces which directed their recon operations on the battalion command net enjoyed more success than if a separate Operations and Intelligence (O&I) net was employed.

Beyond this a number of critical observations are quoted here:

> Navigation planning, using the lensatic compass and odometer technique, has proven effective...if the Army could provide a simple position-determining and heading reference device in scout vehicles, it would significantly...enhance the capabilities of our scout force.
>
> The most successful scout platoon obtain the majority of detailed combat information through stealthy dismounted patrolling and stationary observation. However, most scouts habitually remain mounted and blunder into obstacles and fire sacks. 42
>
> There is hard evidence to substantiate the fact that scouts who initiate direct fire engagements with enemy forces are usually destroyed. Scouts mounted in M3s are particularly prone to do this. As a general rule, its best if scouts use their weapons only to assist in rapid disengagement & immediate survival. 43
>
> Given the size, composition, and tactical employment of Soviet division and regimental reconnaissance units, the scout platoon alone cannot be expected to accomplish a screen mission. IT REQUIRES A TWO TEAM ORGANIZATION WITH DISTINCT RESPONSIBILITIS - ONE TO CONDUCT SURVEILLANCE AND ACQUIRE ENEMY RECONNAISSANCE ELEMENTS, AND ANOTHER TO CLOSE WITH AND DESTROY THEM. 44
>
> The scout platoon alone, even equipped with M3s, is not capable of accomplishing all the tasks associated with a screen mission forward of the TF. As a minimum, the screening force requires two elements - a force dedicated to acquire enemy recon elements and a force to close with and destroy the enemy recon elements. A force consisting of the scout platoon, GSRs, and a company/team, preferably mech heavy, seems to work best at the NTC. 45
>
> Observation posts established by scouts should be planned in depth, not strung out in a linear fashion across the frontage of the TF sector. Scouts have great difficulty withdrawing to subsequent OPs without being acquired, engaged, or overrun by the high speed approach of the OPFOR regiment. 46

The M3 is unsatifactory for use as a reconnaissance vehicle. . . Bottom line - scouts need a vehicle that's smaller, quieter, faster, with a longer operating range than their opponent. They need some firepower, preferably high volume suppressive weapons, and a mounted/dismounted thermal vision capability. Anti-tank killing requirements can be fulfilled with existing shoulder-fired weapons. TF scouts envy the OPFOR scouts who operate in HMMWVs. They move quietly, quickly, with equal or better mobility than the M3. In large measure, the HMMWV's characteristics contribute to the renowned success of the OPFOR reconnaissance elements. 47

With the introduction of the M3 came a reduction in the number of scouts available in each scout squad to perform dismounted reconnaissance and surveillance operations. Although authorized 5, scout squads in the active force usually muster 3 or 4 men in each squad. The M3 requires 3 men to operate the vehicle effectively, usually leaving only one scout to dismount. Given this limitation, the tendency is for scouts to remain mounted. Additionally, the scout riding in the back cannot observe outside the vehicle. Consequently, when he dismounts he is completely disoriented and the vehicle commander or gunner must take the time to orient the scout before he can act. To compensate for this reduction in dismount capability, scout section sergeants put their dismounted scouts on one vehicle and man the other with the minimum three-man crew. 48

The scout platoon should be composed of eight or ten vehicles instead of six. Additional vehicles would free the platoon leader and platoon sergeant to perform all the ancillary tasks associated with directing and sustaining the platoon, without degrading the collection effort. 49

Finally, late in 1987, the RAND Corporation's Arroyo Center published a report based entirely on the data gained at the NTC. The third study was the RAND Report, "Applying the National Training Center Experience: Tactical Reconnaissance", dated October 1987.

The summary of its conclusions provided no new information, merely that greater emphasis should be placed on the reconnaissance function by task force commanders. Some new insights included:

- Active reconnaissance by the defense generally begins only with the initiation of the battle.

- Task forces which do not employ their scouts still find the enemy as a result of combat (recon by death). The data supports the contention that successful reconnaissance is worth at least one company team, if not two.

- Emphasis on the integration of engineers and artillery forward observers with the scout platoon.

- Of special interest is a narrative account of a successful OPFOR reconnaissance operation.

- 90% of the useful intelligence information comes from OPs (surveillance) vice active (moving) reconnaissance.

- OPFOR vismod HMMWVs are faster than the vismod BMP (nee M551) or even the M3 CFV in the actual conduct of the missions.

- The stealth of the HMMWV exceeds in the value the firepower of the BMP, as far as reconnaissance is concerned.

- To avoid scout losses the answer must be stealth, not armor.

- Given that the scouts work over extended distances and operating times, their availability suffers. In 15% of the battles noted, task force commanders employed only the 1-3 vehicles remaining operational in the scout platoon without reinforcement - striking evidence of a lack of emphasis.

> A major, and controversial, point is the present total reliance of task force reconnaissance on tracked vehicles. There is little doubt that stealth is an important factor in scouting...Therefore, we suggest that the HMMWV should be considered as a supplement to the present scout tracks in U.S. heavy divisions. 50

> Considering all of the results of this study, we suspect that the six vehicle scout platoon is simply too small to cover the sectors being assigned to battalion task forces. 51

Lastly, COL J. Robertson, Commander of the 3rd Armored Cavalry Regiment, provided Appendix C,"Differentiating Cavalry From Task Force Reconnaissance". He cautions against using the battalion scouts as a 'mini-cavalry' force.

> The emphasis for scout platoons at task force level is on reconnaissance, not fighting, and on the (fine) details of the enemy situation. Cavalry has the job of longer range reconnaissance (which may necessitate fighting for information) in a broader context, in addition to its fighting functions. Surely the training for the two jobs should not be identical. 52

The intent of this section was to draw from the insights and observations of these recent studies, some idea as to the scope of the problem facing the maneuver battalion scout platoon and the battalion task force as a whole. Two additional study

efforts are ongoing as of the publication of this paper. The USAARMC is conducting a Scout Platoon Concept Evaluation Program (CEP) to examine two new scout platoon variants, while the Combined Arms Training Activity (CATA) at Ft Leavenworth is completing its own Reconnaissance, Surveillance, and Counterreconnaissance Study (Phase I), and the Combined Arms Combat Developments Activity (CACDA) has begun work on Phase II of the same effort. One hopes they move towards solutions, not a continuation of the problems.

SCOUT PLATOON COLLECTIVE TASK LIST
EXTRACT FROM 1988 COLLECTIVE FRONT END ANALYSIS
FOR THE TANK BATTALION TASK FORCE - USAARMS

1. As of February 1989, the USAARMS stated that there were five missions for the maneuver battalion scout platoon.

Conduct a Route Reconnaissance
Conduct an Area Reconnaissance
Conduct a Zone Reconnaissance
Conduct a Screen (Moving or Stationary)
Conduct/Support a Tactical Road March

2. From August 1987 until November 1988, the USAARMS conducted an extensive front-end analysis of the tank battalion task force to determine the battalion missions and collective tasks, as well as the subordinate units missions and tasks down to the crew and individual level. The task list shown below was derived from current doctrine as adjusted by subject matter experts from the Command & Staff Department, whose duties include the writing of armor doctrine. This list is heavily influenced by AirLand Battle doctrine, and some collective tasks, previously performed by scouts may not appear. Likewise, scout tasks performed only in cavalry units do not appear.

TASK #	TASK TITLE
0190	Conduct Rehearsals
1020C	Establish Security
1030C	Process Prisoners of War (POWs)
1060C	Process Captured Documents and Materiel
1080	Employ OPSEC Measures
1185	Establish/Maintain Company and Platoon Communications
1342C	Establish Field Sanitation/Preventive Health Measures
1344C	Conduct Unit Maintenance
1390	Conduct Stand-To
2010	Form a Herringbone
2018	Form a Scout Platoon Coil
2020	Move Through a Defile
2040C	Move Using Travelling
2050C	Move Using Travelling Overwatch
2060C	Move Using Bounding Overwatch
2120	Form a Column
2125	Form a Staggered Column
2144	Form a Scout Platoon Vee
2145	Form a Split Vee
2220	Establish an Observation Post
2250	Establish a Screen Line
2255	Conduct Surveillance From a Screen Line
2260	Move a Screen Line
2360	Conduct Actions On Contact

2370	Gain/Maintain Enemy Contact
2380	Disengage From The Enemy
2675C	Evacuate Casualties
2710	Emplace a Hasty Minefield
2730	Remove a Hasty Minefield
2750C	React to an Air Attack (Active)
2751C	React to an Air Attack (Passive)
2770	React to Indirect Fire
2880	Assist a Passage of Lines
2907	Assist a Relief In Place
3058	Engage Enemy with Indirect Fire
4000	Determine Route Trafficability
4010	Determine Area/Zone Trafficability
4040	Reconnoiter an Area for Chem/Bio Contamination
4045	Reconnoiter an Area for Radiological Contamination
4080	Reconnoiter a Built-Up Area
4090	Reconnoiter an Obstacle
4110	Reconnoiter a Crossing Site
4115	Reconnoiter a Defile
4120	Reconnoiter a Bridge
4130	Conduct a Dismounted Patrol
4145	Reconnoiter By Fire
5230	Destroy Unit Vehicles & Equipment
5730	Recover a Vehicle By Similar Vehicle
6042	Conduct Tailgate Resupply
6044	Conduct Service Station Resupply
8140C	Move \cross a Radiologically Contaminated Area
8145C	Move Across a Chemically/Biologically Contaminated Area
8220C	Conduct Hasty Decontamination
8240C	Prepare For a Friendly NBC Attack
8270C	React to a Chemical/Biological Attack
8275	React to a Nuclear Attack
8320	Emplace Chemical Agent Alarms

MANEUVER BATTALION SCOUT PLATOON REQUIREMENTS

From this survey of its 47 years of history, it should be evident that the basic missions of the reconnaissance or scout platoon have not changed. The stated primary mission has shifted from reconnaissance to security and back, but these have remained the two most important missions of the platoon. The platoon has also persevered through a myriad of secondary missions, tasks, or requirements. The constant changes in doctrine and organization were both a response to and perpetuator of a set of problems.

The purpose of this section is to set forth what I believe are the basic requirements of the scout platoon for a maneuver battalion task force. The basis for these observation comes from a number of sources:

1) Historical insights drawn from the 47 years of existing recon/scout platoon history.

2) U.S. Army Training Board, "White Paper 4-86 - Enhancement of Reconnaissance and Counter-Reconnaissance Techniques."

3) USAARMS Report on NTC Special Focus Rotation 87-1, "An Assessment of Reconnaissance and Counter-Reconnaissance Operations at the NTC", Feb 1987.

4) RAND Report, "Applying the National Training Center Experience: Tactical Reconnaissance", Oct 1987.

5) USAARMS 1988 Collective Front End Analysis of the Tank Battalion Task Force.

MISSION REQUIREMENTS

1. Reconnaissance Missions/Tasks.

a. Route Reconnaissance - The maneuver battalion scout platoon must be able to conduct reconnaissance on <u>two routes simultaneously</u> (to include their laterals) to support the movement of its parent. FM 71-2 describes the formations used by a battalion task force and in most instances a battalion will advance on at least two routes. If required, it will pass through a stationary unit at two locations. Given the possible formations, up to three routes may be used. In limited cases, (e.g. battalion task force is marching as an interior force in a follow and support role) a single route will be the norm.

The scout element on each route must be capable of organizing into a two-tiered structure, with a stealth-oriented, surveillance element leading and supported by an overwatching element capable of reconnaissance by fire, suppression, or extraction of the surveillance element. Finally, The platoon must be able to mark bypasses of any obstacle for the following companies.

b. Zone Reconnaissance - Cavalry conducts a zone reconnaissance acting generally like an advance guard, and accepting combat as a part of the reconnaissance mission. Either corps or divisional cavalry units may not always be operating to the front of the task force.

Regardless, the maneuver battalion scout platoon performs a zone reconnaissance differently if it is to survive. It must be able to penetrate enemy security forces in the battalion zone of attack, preferredly by stealthy infiltration, to obtain specific information which confirms or denies the IPB as a part of the battalion reconnaissance operations. The scout platoon should not act as an advance guard or engage in combat unnecessarily. This method of movement demands that the lighter scout element leads, either mounted or dismounted. They are supported by a second tier of scouts, which could be tracked or wheeled, following in support/overwatch using the terrain to mask or conceal themselves as much as possible. If required, the tracked elements must attempt to infiltrate beyond the enemy's security forces.

c. Area Reconnaissance - The maneuver battalion scout platoon must be able to conduct an area reconnaissance of proposed bivouac areas, assembly areas, or other selected, defined areas of operation in the context of LIC. It may also be called upon to recon a subsequent battalion battle position or sector to the rear. In many instances, a requirement for guides may exist concomitant to this mission.

d. Recon Patrolling - The maneuver battalion scout platoon must be able to conduct squad-size mounted or 3-5 man dismounted patrols in support of the battalion reconnaissance effort; apart from route, area, or zone recon missions assigned to the entire platoon. Patrols may be conducted while the platoon is performing a security mission (e.g. screen) or while on a reconnaissance mission.

e. Minefield and Obstacle Detection - includes marking limits, bypasses or breaches. The scout platoon must have the ability to detect minefields, mark their limits, and mark bypasses. This task is ideally performed mounted by engineer assets, but in the event they are not available, the scout platoon must have a viable means of accomplishing this task rapidly using dismounted scout teams.

2. Security Missions/Tasks. This section presupposes a return to four doctrinal levels of security: surveillance, screen (incl counterreconnaissance), guard, and cover.

a. Surveillance - This level requires the establishment of a surveillance line of OPs and supplemented by patrols. The maneuver battalion scout platoon must be able to establish multiple observations posts for extended periods of time (CONOPS),

which provide surveillance over a given distance (battalion front or flank), and in depth. If required by terrain, sufficient capability must be present to patrol between the OPs, either dismounted (preferred), or mounted, provided stealth can be maintained.

Under this level of security, no active measures to attack enemy recon or maneuver forces are initiated without approval from battalion. Essentially this is a passive effort which provides early warning only, and since no counterreconnaissance activity is conducted, no information is revealed to the enemy that he has been detected. Direct fires are used only in self-defense. No active (emitting) STANO devices (e.g. GSRs) are employed, except in depth behind the surveillance line. Surveillance lines may be established to the front, flank, or rear.

b. Screen (Incl Counterreconnaissance) - This level also requires the establishment of OPs, except it further requires the appropriate measures to destroy or deter threat reconnaissance units and/or threat combat reconnaissance patrols (CRPs) from penetrating the screen. As above, the maneuver battalion scout platoon must be able to establish multiple observations posts for extended periods of time (CONOPS) which provide surveillance over the assigned distance (battalion front or flank), and in depth. The scouts must be able to employ indirect fires on approaching reconnaissance or combat patrols attempting to penetrate the screen line.

The platoon must have minimum sufficient organic, direct fire capability (e.g. reaction/support forces) to defeat (turn away) or destroy enemy patrols which attempt to penetrate the screen. This latter capability represents an economy of force, and is accomplished by the same element(s) that provide supporting overwatch, suppression and extraction capability during reconnaissance operations. The key point is that the amount of organic capability is the minimum required under all primary mission profiles. This organic capability may not suffice to meet all screen scenarios (METT), therefore the need to receive attachments of additional tank, mechanized infantry, or antitank assets is recognized.

The scouts must be able to employ attached GSRs and/or a tank or mechanized platoon to assist in the counterreconnaissance effort. All types of STANO (including emitters) may be employed during screen operations. Screens may be conducted to the front, flank, or rear.

c. Guard (Advance/Flank/Rear) - The maneuver battalion scout platoon will participate in a guard mission only as a part of the entire battalion or in rare instances, as a part of a maneuver company/team. Its specific tasks during a guard mission remain either surveillance or screen of the remainder of the guard force.

d. Cover (Advance/Flank/Rear) - The maneuver battalion scout platoon will participate in a covering force mission only as a part of the entire battalion. In doing so it will perform either surveillance or screen roles for the entire battalion task force.

e. Target Turnover Teams/Obstacle Guard - The maneuver battalion scout platoon should not be assigned the responsibilities of target turnover or obstacle guard unless such tasks can be conducted concurrently with other missions; or unless deemed essential by the battalion commander.

f. Rear Area Security - The maneuver battalion scout platoon should not be assigned the mission of rear area security in the battalion sector. If however the entire battalion task force is assigned as a tactical combat force (TCF) during rear area combat operations (RACO), the scout platoon will perform its usual reconnaissance, security, or special missions within the context of the battalion operation.

g. LOGPAC Escort/POW Guard - The scout platoon should not be assigned the tasks of LOGPAC escort or POW guard. These missions should be performed by a maneuver unit in a follow and support role.

3. Economy of Force Combat Missions/Tasks - The maneuver battalion scout platoon <u>should not be</u> considered a combat maneuver platoon or a cavalry force. It performs reconnaissance, limited security, and special missions or tasks in support of the battalion task force as a whole. The assignment of any combat mission normally performed by a tank or mechanized platoon or company, or by an armored cavalry troop, <u>SHOULD NOT BE GIVEN</u> without weighing the potential loss of this intelligence asset, and then only when deemed essential by the battalion commander. Economy of force combat missions in this catagory include:

a. Hasty Attack - The scout platoon or some of its elements may be called upon to perform this mission/task during a screen. If conducted during a zone reconnaissance mission, it would be performed as a reconnaissance by fire. Regardless, any attack by the scouts should occur as a result of a unique opportunity offered by the factors of METT rather than a preplanned event.

b. Hasty Defense - This task may be performed by the maneuver battalion scout platoon or attached elements during screen missions. As above, it should result from an immediate need on the battlefield rather than as a preplanned event.

c. Defend a Battle Position - This mission should not be given to the maneuver battalion scout platoon. This differs from the requirement for an ACR's scout platoons which may be called upon to defend BPs.

d. Delay - The maneuver battalion scout platoon may assist all or a portion of the battalion task force in the conduct of a delay. Usually the scout platoon will perform another security or reconnaissance mission during a battalion delay mission. However, if the threat is not a heavy force or if it lacks supstantial artillery support, the scout platoon may be tasked to conduct a delay. The task force commander must weigh the potential loss of this intelligence asset if he uses it in a maneuver force, combat role.

e. Raid - The entire scout platoon should not be given this task/mission unless deemed essential by the battalion commander. This does not preclude minor "raid-like" tasks such as conducting patrols to obtain a POW.

f. Ambush - The entire scout platoon should not be given this task/mission unless deemed essential by the battalion commander. This does not preclude the use of ambush as a tactic by elements of the scout platoon, especially during screens.

g. Defend a Roadblock or Complex Obstacle - This task may be performed by elements of the maneuver battalion scout platoon (or attached elements) during a screen mission or a delay conducted by the battalion task force as a whole. The "defense" will normally consist of an ambush, coupled with the extensive use of indirect fires. Here again, the tradeoff of intelligence information which may be lost for the task force as a whole must be weighed against the use of the scouts in this role.

4. Command, Control, and Communications (C3) Assistance Tasks.

a. Combat Liaison - This is a command assistance function in which the maneuver battalion scout platoon must be prepared to provide backup liaison support to the TOC. This could occur if the battalion is moving with a follow and support mission, and the ability to recon to the front is limited. This task could be accomplished concurrent with another recon or security mission, but is done only when deemed essential by the battalion commander.

b. Contact Party - This is a command assistance function in which the maneuver battalion scout platoon must be prepared to provide contact patrols along boundaries with adjacent units. This task will normally be accomplished concurrent with another recon or security mission and only when deemed essential by the battalion commander.

c. Guides - This is a control assistance function in which the maneuver battalion scout platoon must be prepared to provide guides, mounted or dismounted, to assist the movement of its

parent battalion organic or attached elements; or to units which are passing through the parent battalion's sector or battle position. This task will normally be accomplished concurrent to another recon or security mission.

d. Traffic Control Points (TCPs) - This is a control assistance function in which the scout platoon must be prepared to provide TCPs (stationary) to assist the movement of its parent battalion organic or attached elements. This task will normally be accomplished concurrent with another recon/security mission.

e. Quartering Party - This is a control assistance task in which the maneuver battalion scout platoon will serve as a part of the battalion quartering party during all administrative movements. The requirement to provide TCPs may be assigned concurrent to this task.

f. Messenger - This is a communications assistance task. Under unique OPSEC or hostile EW environments, the maneuver battalion scout platoon must be prepared to provide mounted messengers from its location on the battlefield to the TOC. This task may also be performed in support of the battalion TOC to adjacent or higher TOCs, but only when deemed essential by the battalion commander.

g. Radio Relay - This is a communications assistance task. The maneuver battalion scout platoon must be prepared to provide an organic radio relay to maintain communication with the battalion command group or battalion TOC, if the factors of METT cause them to operate beyond the limits of their organic radios. They should not be employed as a radio relay for general traffic.

5. NBC Survey/Monitor Party - The maneuver battalion scout platoon may be tasked to provide an NBC survey/monitor party. Such teams should be equipped with fully tracked, armored vehicles with a collective NBC protection system, individual protective clothing, and assigned chemical or radiological survey detection/survey equipment.

6. Damage Control & Rescue Assistance - The maneuver battalion scout platoon should not be assigned the task of damage control. Manpower to assist medical, maintenance, recovery, and engineer heavy equipment teams should be drawn from maneuver companies. The scouts may provide security (surveillance or screen) for major damage control operations or provide C3 assistance.

7. Conduct/Support Airmobile Operations - Elements of the scout platoon may be tasked with the establishment of a helicopter LZ. They may move by helicopter to accomplish a reconnaissance or surveillance mission. This could include the establishment of a dismounted OP or the insertion of a mounted or dismounted patrol, especially in a LIC environment.

8. Conduct Concurrent Tactical Missions/Tasks For Limited Periods Of Time - The maneuver battalion scout platoon must have the capability to transition from a reconnaissance to a security mission or vice versa, meeting the intent of each and without degrading either capability, for a limited period of time. This requirement occurs when the task force is in transition: company teams are reorganizing or resupplying, key leaders are conducting leaders' reconnaissance or at orders groups, and attention is generally focused on preparation for (future) combat or subsequent mission.

During that limited period of time, the need to maintain security (a minimum of early warning) of the task force, as well as commence reconnaissance for the next mission, places extraordinary demands on the platoon. Normally in this phase, the scout platoon leader will also be participating in troop leading procedures as a part of the battalion orders group and logistical resupply of the platoon elements must occur. The scout platoon must be capable of concurrently providing minimal surveillance (security) and reconnaissance capabilities to the task force for up to 6-12 hours at a time.

CONCEPTUAL BATTALION RECONNAISSANCE AND SURVEILLANCE PLATOON

1. THREAT - The threat to the scout platoon of the maneuver battalion essentially consists of the reconnaissance or combat patrols employed by the threat; or his security forces forward of his initial defensive positions. The majority of these forces are expected to be motorized rifle elements, but will usually include main battle tanks up to platoon strength. The scout platoon must be capable of defeating (turning away) or destroying single or patrol size elements of infantry fighting vehicles, APCs, or dismounted infantry with organic antiarmor and automatic weapons.

If tanks are included in the threat force, the scouts must have a self-defense capability. The requirement to defeat tank formations of platoon size or larger necessitates the use of friendly tank or antitank elements attached to or supporting the scouts.

The scout platoon must have the capability to operate in an NBC environment, when encountering mines, or when subjected to mortar & artillery fire.

It should not be required to defeat defending enemy platoon size elements; attacking tank or BMP/IFV companies; long range ATGM vehicles, antitank guns and tank destroyers; or attack helicopters. These threats overmatch its doctrinal capabilities, and require him to report information and break off any firefight, continuing or regaining surveillance of the enemy force as soon as possible.

2. TACTICAL FLEXIBILITY - The scout platoon must have the capability to move most or all of its assets mounted by stealth. These elements must be able to dismount a pair of scouts while retaining the ability to rapidly move crewed/combat-capable vehicle(s). At least one of these vehicles must be capable of overwatching the movement of the dismounted scouts with an automatic weapon. The platoon must also have the ability to provide overwatch/supporting direct fires out to 2000 meters. This capability must also be effective in suppression or reconnaissance by direct fire. The organization of the squads/sections must be adaptable to battle drills,with no requirement for battle drills anticipated for the maneuver battalion scout platoon as a whole.

The platoon must be able to recon two routes and laterals without reinforcement. Each element on a route must be capable of moving by stealth, be able to employ overwatch from a supporting element, and have a minimum dismount capability.

The platoon must be able to establish up to 6 OPs for extended periods of time (9 for short periods) while retaining a minimal, organic counterreconnaissance capability capable of defeating targets described above. This counterreconnaissance or support element must be capable of providing additional OPs and/or dismounted scouts for additional patrolling if no counterreconnaissance is required from scout platoon assets.

The platoon must be able to accept attachment of one or more GSR teams, or a manevuer platoon. The platoon must have sufficient robustness in its force to be able to perform all doctrinal missions, in a degraded but acceptable mode, at 60% strength (personnel and/or equipment) consistent with the norms in FM 101-5-1 and requirements in the V/VI Corps Field SOPs.

100-80%	Green - Mission Capable
80-60%	Amber - Mission Capable w/some difficulty
60-40%	Red - Mission Capable but w/major problems
Less-40%	Black - Not Mission Capable

Finally, the platoon should be able to transition from one mission to a second, maintaining a reduced capability on both for limited periods of time. This meets the battalion's need for increased security during its preparation for the next mission, while insuring assets are available to begin reconnaissance. At the scout platoon level, an example of this is the transition from a flank screen to a reconnaissance of the battalion's zone of attack, and allowing for concurrent orders group and CSS resupply actions.

3. COMMAND, CONTROL, & COMMUNICATIONS - The Platoon Leader and Platoon sergeant must be equipped with separate vehicles, neither of which is dedicated to any function other than C2, or in the case of the platoon sergeant, CSS coordination. This allows the

platoon leader or sergeant to attend orders groups or coordinate with the TOC (S2 for IBP & S-3 for security). The PL and PSG's vehicles should be equipped with a POSNAV device. All vehicles, except motorcycles, should have a simple vehicular compass and odometer (kms) device to aid in navigation. Motorcycles and their drivers should be assigned to the headquarters section as their primary tasks tend to support C2 rather than direct scouting.

The platoon must have a vehicular FM secure radio on each vehicle, with dual net capability on platoon and section leaders vehicles. The platoon should have a robust portable radio (PRC) capability for dismounted internal communications. Each squad should be capable of laying wire and employing organic field phones. Platoon equipment should include signal flares, chem lights, and flag sets. The platoon should have the capability to conduct radio retrans or relay, and motor messenger. The platoon should be equipped with digital communications terminals for interfacing with TACFIRE or sending burst data transmissions. The platoon should be equipped with a quick erection mast antenna to assist in passing information to the Bn TOC when distance or terrain become factors.

4. STANO CAPABILITY - The platoon must be equipped with high power binoculars or observation telescopes. It must also have man-portable thermal observation devices (e.g. UAS-11 or PAS-7), in additional to any vehicular or weapon sight capabilities. The platoon must have a lightweight, manportable, mine detection capability and a marking system to denote limits, breaches, or bypasses. The platoon must have a dismounted rangefinding capability (e.g. AN/GVS-5). The platoon must have an NBC detection capability.

The platoon might be equipped with a photo-disk or VCR camera w/telephoto lens capability to provide the Bn S-2 with ground based IMINT as a part of the surveillance plan/effort. The platoon might employ a mast-mounted surveillance system or specialized listening devices.

The platoon must be able to integrate the use of ground surveillance radar teams from the divisional MI battalion (CEWI). Lastly, the platoon must have sufficient dismount capability to perform patrolling without degrading the basic doctrinal number of observation posts.

5. MOBILITY - The platoon must have a majority of its vehicles capable of moving with stealth. At the present time, this means a wheeled vehicle capability. These vehicles must exceed the road speed of the major (pacing) tracked combat vehicle of the battalion. Wheeled vehicles must have a deep wade capability required, (amphib is preferred). Wheeled vehicles must be 4x4 and posses a low military load classification (MLC). Wheeled vehicles must have run-flat tires and excellent cross-country (sprint) capability.

The platoon's tracked vehicles' (if any) mobility must be equal if not greater than the pacing tracked combat vehicles in the battalion. They must be able to deep wade or snorkle, but amphibious capability is preferred. Likewise, the tracks must have an excellent sprint capability cross-country.

6. CONCEALABILITY & STEALTH - The wheeled vehicle assets of the platoon must be capable of moving with stealth. They must be small, low, quiet, and easily concealed, consistent with personnel, STANO, communication, and weapons requirements. Both wheel and track vehicles must be capable of projecting smoke grenades for rapid concealment to assist in breaking contact. Track vehicles should be capable of generating smoke. Track vehicles should ideally have size and noise characteristics similar to the wheeled vehicles, but not exceeding the major pacing vehicles of the parent battalion.

7. WEAPONS & LETHALITY - Given its mission requirements, the platoon must be capable of rapidly suppressing or destroying dismounted threats (Inf/AT wpns), light armored recon vehicles, APCs, IFVs, and tanks operating singly or in pairs. Starting on the low end, the platoon must be liberally equipped with automatic weapons. A minimum of one M249 SAW per squad size element for dismounted use is essential. Each vehicle should mount a 7.62mm or .50 caliber machinegun (flex or coax) with API or SLAP ammunition. The tracked or heavy wheeled vehicles should mount a light automatic cannon in the 25mm to 60mm range which can destroy IFV/APCs out to 2000 meters. The platoon should have a limited self-defense capability against tanks with a range not to exceed 2000 meters. If possible, a single fire & forget ATGM or other medium AT system should serve as the munition for both dismounted and vehicle launched systems (e.g. AAWS-M). The platoon should have the capability of conducting reconnaissance by indirect fire with one or more organic weapons systems and be able to rapidly access the TACFIRE system for supporting field artillery.

8. SURVIVABILITY - Wheeled vehicles (except motorcycles) must have protection against small arms and shrapnel from mortars, artillery, or grenades (preferred protection up to 12.7mm frontally, 7.62mm flanks). Tires must be run-flat capable. Tracked vehicle protection levels must be capable of defeating light cannon frontally and 14.5mm on the flanks. Tracked vehicles should have reactive armor to protect against small, shaped-charged munitions. Both vehicles must provide protection against antipersonnel mines and limit the casualty producing effects, as best possible, of antitank mines.

9. LOGISTICS - All vehicles must have equal or higher RAM than the major (pacing) tracked vehicle of the battalion. They should share a common fuel. Fuel usage in the wheeled vehicles should

be low; in excess of 48 hours of normal mission usage between refuelings. Tracked vehicles must have a quiet, auxillary power unit (APU) to allow for operation of STANO systems and radios without the need to operate the main pack. If motorcycles are present, they must be capable of being carried by other vehicles in the platoon. Some of the vehicles must be equipped with a winch, to assist in self-recovery of platoon assets.

10. ERRATA - The platoon must not be subject to preconceived conditions concerning end strength. Its size must be consistent with meeting the mission requirements generated by a front-end analysis of the battalion task force. If the platoon is too small, other task force assets must compensate constantly. On the other hand, the platoon must not become too large and complicated (span of control) or include unnecessary redundance with other task force assets. The principle of economy of force works both ways.

SECTION IV

RECOMMENDED RECONNAISSANCE & SURVEILLANCE PLATOON - 1990's

At the end of Section III, I developed a platoon mission profile. Based on that, I offer a notional Reconnaissance and Surveillance Platoon (R&S) for the CCH maneuver battalion in the 1990s. The R&S Platoon embraces its two primary historical missions, giving the lead rightfully to reconnaissance tasks, while recognizing that the platoon provides security primarily through surveillance.

I have intentionally avoided use of the word "scout" in the title. The scout is the most vital component of the platoon, but he is also found in armored cavalry, light cavalry, air cavalry, and as dismounted scouts in light infantry battalions. Each of these units emphasizes the scout in slightly different roles, based on doctrinal missions, organization, and equipment, so scout is too general purpose a term. I also want to avoid unnecessary biased linkages to previous scout platoon TO&Es with their confusing mission requirements (e.g. a mini-cavalry force).

HEADQUARTERS SECTION

The headquarters section, like the scout squads, is built around a six man element for sustainability and CONOPS. It provides a separate command and control capability not directly competing with the tasks of the light or heavy scout sections, in that there is no requirement for the section to man a forward OP or provide overwatch to reconnoitering scout elements. The PL & PSG provide complementary C2 and CSS functions while the motorcycle scouts provide C2 assistance with detracting from the scout sections.

The headquarters section consists of two HMMWVs, each with the platoon leader or platoon sergeant and a driver, and two motorcycles with scout/operators. Each leaders' HMMWV has a secure, two net capability. Both vehicles have a Global Positioning System (GPS) device to provide precise navigation/ location information. The PL has a AN/PSC-2 Digital Communications Terminal while the PSG has a rapidly emplaced mast antenna (e.g. AB 903/G or AK 1300).

The two motorcycle scouts provide the platoon leader with the ability to perform mounted messenger, guides, liaison, or contact team without diverting light or heavy scout assets. The platoon leader can also use the motorcycle scouts to reinforce the light or heavy scout sections under certain METT conditions. Usually, the motorcycle scouts will remain with the PL/PSG during hours of darkness to better facilitate local security and CONOPS of the platoon headquarters element.

The PSG or senior motorcycle scout may assist in guiding CSS LOGPACs to the scouts location without disrupting the ongoing R&S platoon mission. The motorcycles can be carried on external racks on the headquarters' HMMWVs, if required, but are normally driven by their operators.

In reconnaissance operations, the PL and PSG can each control a separate R&S Platoon element (e.g. on separate routes) or they may echelon themselves with a forward element (e.g. PLDR) controlling scout movement and a trailing control element (e.g. PSG) that is responsible for passing information to the Bn/TF TOC.

During security operations, a separate command observation post (COP) is established where the PL/PSG can best control the surveillance or reconnaissance of the light scouts and the overwatch/support of the heavy scouts. The headquarters element can establish a 6-man, command OP for extended periods (CONOPS) with local security, or can operate two 3-man command OPs for shorter periods if required by the the width of the battalion's frontage or the distance from the battalion TOC.

The headquarters section has two M249 Squad Automatic Weapons which may be fired from the HMMWVs or dismounted for self-protection.

LIGHT SCOUT SECTION

The light scout section provides the R&S platoon with a stealthy reconnaissance and surveillance capability. It is composed of three six-man squads, each of two HMMWVs with a three man crew. The HMMWV provides a quiet, small, easily concealed platform for the light scout squad and is kelvar armored.

In addition to high power binoculars and/or telescopes, the light scouts are equipped with the AN/UAS-11 Night Vision Device (thermal) and AN/PAS-7 Handheld Thermal Viewers. It also has passive night sights for some of its weapons.

Each HMMWV is equipped with a secure FM radio and one additional PRC-126 is available for dismounted operations. Field phones are included in the TO&E.

Each of the three squads contains a .50 cal HMG (with SLAP and API ammunition) and a MK-19 Grenade Machinegun mounted on the HMMWVs and a M249 SAW for dismounted use. This section fires its weapons only in self-defense under normal circumstances in both reconnaissance and surveillance/security missions. All of the HMMWVs are equipped with smoke grenade launchers to provide concealment in breaking inadvertant enemy contact. The MK-19 GMG can provide limited recon-by-indirect fire.

The weapons in the light scout section provide maximum automatic suppressive fires to break contact, yet enough capability to destroy other light forces in a chance contact. The extended ranges of the .50 cal and MK-19 can provide overwatching suppression on enemy weapons engaging a bounding HMMWV.

The light scout section serves as the "1st Tier" in all mission profiles. During reconnaissance missions, the light scouts conduct surveillance, infiltrate mounted or dismounted employing stealth, and pass specific information on the enemy and terrain to the platoon headquarters. During security missions, the light scouts establish observation posts (OPs) or patrol.

This section provides the platoon three OPs for extended durations or six OPs for limited periods of time. The HMMWVs can deep wade, cross low MLC bridges, and move at high speed on primary and secondary roads, while maintaining an excellent cross-country capability.

HEAVY SCOUT SECTION

The heavy scout section provides the R&S platoon with the minimum necessary support capability, the "2nd Tier", for all mission profiles. The key is the level of cooperation and effective training (battle drills) which cannot be achieved through habitual task organization. The heavy scout section is exactly that. They are scouts first, not tankers, mech infantry, or mortarmen. This eliminates the problems of low-density MOS training or unique vehicle CSS requirements as experienced with the M41 or M551 light armor of the past. It can also provide trained scouts to replace casualties in the light scout section.

Each of its three squads is mounted in a modified CFV and carries a five man crew in peacetime, augmented with a sixth scout in wartime. One of the five crewmen is a trained FO (13F).

The heavy section provides the platoon a more survivable element if subjected to artillery fire or where collective NBC protection is important. It can assume any of the light scout missions, except that their vehicle precludes mounted movement with stealth. This section provides the scouts an amphibious capability.

With its 25mm cannon, the heavy scout section can destroy IFVs or APCs in self defense, if required. With the AAWS-M, the scouts have a limited self-defense capability against tanks though only a few missiles would be carried. Each CFV scout squad also carries a AAWS-M sight system for dismounted firing, this missile being common with the one fired from the vehicle. The AAWS-M sight doubles as a portable thermal viewer for surveillance.

During reconnaissance missions, they can overwatch/support/extract the light scouts by delivering suppressive or precision fires out to 2000m with either its cannon or AAWS-M on a modified ATGM launcher arm. They also provide a sizeable dismounted recon capability of three 3-man teams, to reconnoiter built-up areas or do other dismounted tasks (e.g. mark minefield limits/bypass).

During security or surveillance missions, they provide a minimum essential, organic counterreconnaissance element, or three additional OPs in depth if other maneuver assets perform the counterreconnaissance task.

Because of its armored protection, this section performs the primary NBC survey or monitoring tasks.

Each of the three squads has a Forward Observer with an AN/PSC-2 Digital Communications Terminal for interface with TACFIRE. The FOs with DCTs provide a rapid and effective linkage between the R&S platoon and the fire support system.

RECONNAISANCE & SURVEILLANCE PLATOON
(1 Off + 38 Enlisted)*

8x HMMWVs
3x CFV (modified)
2x Motorcycles
13x VEHICLES TOTAL *(1+41 Wartime)

PLATOON HEADQUARTERS (1 Off + 5 Enlisted)

M1026 HMMWV wo/W	M1038 HMMWV Cgo w/Winch	2x Motorcycles
1x PL (M4 Carbine)	1x MSG (M4 Carbine)	1x SSG (M4)
1x Drvr (M249 SAW)	1x Drvr (M249 SAW)	1x CPL (M4)
Equipment		
2x VRC SINCGARS	2x VRC SINCGARS	2x PRC-126s
1x Global Posn System	1x GPS	2x Binos
1x AN/PSC-2	1x AB-903/G mast antenna	2x AN/PVS-7B
1x AN/PAS-7 NVD	1x AN/UAS-11 NVD	
1x Binoculars	1x M-49 Telescope	
1x AN/PVS-5 or 7B	1x AN/PVS-5 or 7B	
1x CE-11	1x TA-312	
1x SB/922		

LIGHT SCOUT SECTION (18 Enlisted)

M1043 HMMWV wo/W	2d LT SCOUT SQUAD	3d LT SCOUT SQUAD
(& M2 .50 cal)	Same as 1st Squad	Same as 1st Squad
1x SFC (M16A2)	except SSG as SL.	except SSG as SL.
1x Driver (M16A2)		
1x Scout (M203)		
M1044 HMMWV w/W		
(& MK-19 GMG, Mod 3)		
1x SGT (M16A2)		
1x Driver (M16A2)		
1x Scout (M249 SAW)		
Sqd STANO/Commo Equip		
2x VRC (one per veh)	Same as 1st Squad	Same as 1st Squad
1x PRC-126		
1x AN/UAS-11		
1x AN/GVS-5		
1x AN/PAS-7		
2x Binoculars		
2x AN/PVS-4 NVS		
2x AN/PVS-5/7B NVG		
1x M-49 Telescope		
1x CE-11		
1x TA-312		

HEAVY SCOUT SECTION (15 or 18 Enlisted)

M3A2 CFV (AAWS-M in lieu of TOW)			5th Hvy Sct Sqd	6th Hvy Sct Sqd
1x SecLdr	SFC	(M16A2)	Same as the 4th Squad except SLs are Staff Sergeants.	
1x Gunner	SGT	(M16A2)		
1x Driver	SP4	(M4)		
1x FwdObsr	CPL	(M16A2)		
1x Scout	SP4	(M249 SAW)		
(1x Scout	PFC	M16A2)*		

Sqd STANO/Commo Equip

Same equipment in 5th and 6th Squads.

- 1x VRC SINCGARS
- 1x PRC-126
- 1x Mine Detection Set
- 1x AAWS-M Sight (also used as portable thermal viewer.)
- 1x Binoculars
- 1x AN/PSC-2 DCT
- 2x AN/PVS-5 or 7B NVGs
- 3x AN/PVS-4 NVS
- 1x M-49 Telescope
- 1x CE-11
- 1x TA-312

* Wartime Augmentee.

CONCLUSION

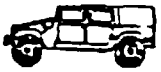
Historically, this would not be the largest nor smallest reconnaissance or scout platoon at the maneuver battalion task force level. Its three sections have been organized so that they may lose up to 40% of their strength of vehicles or personnel and still be mission capable. This organization emphasizes the wheeled vehicle scout, as the CFV mounted scout tends to support, and could be replaced by selected CCH maneuver elements "in a crunch". Yet, the CFV/heavy scout provides complementary recon/overwatch and surveillance/counterreconnaissance capabilities (2-tier), while maximizing the strengths and minimizing the weaknesses of each section.

Significantly, it returns true stealth to the battalion R&S unit, a capability they have not enjoyed since the early 60s. This platoon retains the spirit of flexibility found in the early cavalry platoons, but does not try to become a cavalry surrogate.

RECON & SURVEILLANCE PLATOON

PLATOON HEADQUARTERS

PLT LDR (2LT) M16A2
DRIVER (SP4) M203



PSG (MSG) M16A2
DRIVER (SP4) M249 SAW

SCOUT (SSG) M4 CARBINE
SCOUT (CPL) M4 CARBINE

LIGHT SCOUT SECTION

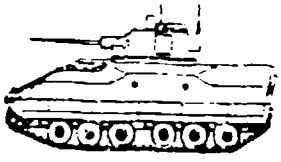
SECT SGT (SFC) M16A2
DRIVER (SP4) M16A2
SCOUT (PFC) M203

ASST SL (SGT) M16A2
DRIVER (SP4) M16A2
SCOUT (PFC) M249 SAW

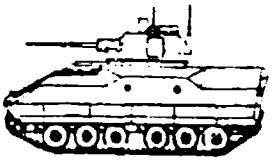
Same as 1st Squad.

Same as 1st Squad.

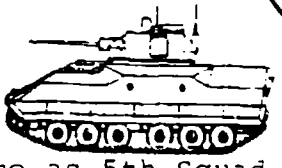
HEAVY SCOUT SECTION



SECT LDR (SFC) M16A2
CFV GUNNER (SGT) M4
CFV DRIVER (SP4) M4
SCOUT (SP4) M249 SAW
FWD OBSR (CPL) M16A2
SCOUT (PFC) M16A2



Same as 4th Squad, except SSG as SL.



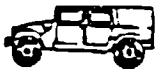
Same as 5th Squad.

FIGURE 23A. Recommended Battalion Recon & Surveillance Platoon - Vehicles, Weapons and Personnel.

RECON & SURVEILLANCE PLATOON

PLATOON HEADQUARTERS

2x SINCGARS VRC
1x Global Posn System
1x AN/PSC-2 DCT
1x AN/PAS-7 NVD
1x Binoculars
1x AN/PVS-5



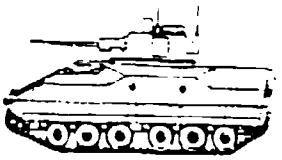
2x SINCGARS VRC
1x GPS
1x AB-903/G Mast Antenna
1x UAS-11 NVD
1x Telescope
1x AN/PVS-5 NVG
1x AN/GVS-5 Laser Rngfndr

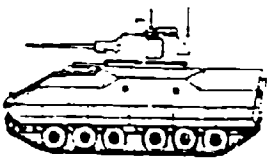
2x PRC-126 SUR
2x Binoculars
2x AN/PVS-7B NVG

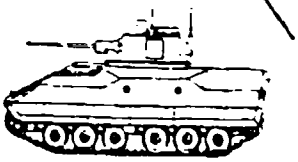
LIGHT SCOUT SECTION

2x SINCGARS VRC
1x AN/PRC-126 SUR
1x AN/UAS-11 NVD
1x AN/GVS-5 Laser Rngfndr
1x AN/PAS-7 NVD
2x Binoculars
2x AN/PVS-4 NVS
2x AN/PVS-5 NVG

HEAVY SCOUT SECTION







1x SINCGARS VRC
1x AN/PRC-126 SUR
1x AN/PSC-2 DCT
2x AN/PVS-5 NVG
3x AN/PVS-4 NVS
1x Mine Detector
1x Binoculars
1x AAWS-M Sight (Thermal)

FIGURE 23B. Recommended Battalion Recon & Surveillance Platoon - Comms and STANO.

RECONNAISSANCE & SURVEILLANCE PLATOON
1990s

THREAT - The typical threat to the maneuver battalion scout platoon has remained essentially the same since the early 60s and should remain so well into the next decade for the R&S Platoon. If on reconnaissance, it will normally encounter motorized infantry in the security forces supported by BMPs, tanks, and a variety of medium ATGMs or lighter AT weapons. Specifically, it will face machinegun and automatic assault rifle fire, as well as hand grenades or 30mm grenades from the AGS-17 or BG-15. It will encounter scatterable mines (AP/AT) and mechanically/manually emplaced minefields. It must face 120/122/152mm high explosive and DPICM munitions, with increasing chances of facing PGMs in the late ninties. Finally, the HIND-D/E/F, HAVOC, or more advanced threat attack helicopters will enter the equation. The key to remember is that none of these can kill the scout if he is not acquired, ranged, and successfully engaged.

TACTICAL FLEXIBILITY - The presence of separate light and heavy sections provides for a large variety of combinations optimized to fit the requirements of METT for the local situation. The separate headquarters section enhances this flexibility, and with the addition of motorcycles greatly multiplies the C3 capability without decrementing the scout sections. This platoon can meet the requirement for mission transition for short periods of time. By maintaining two separate scout teams, each with a C2 element, it can conduct concurrent reconnaissance and surveillance missions. This platoon organization is adaptable to battle drills at the squad and section levels. This platoon has sufficient robustness in the organization to accomplish all assigned missions with minimum difficulty at 60% strength in each section or across the platoon. Finally, the presence of scouts in the heavy section rather than other combat MOS, allow them to rapidly reinforce or assume the role of the light section's scouts, with new supporting elements coming from combat maneuver platoons (tank, BFV, ITV).

COMMAND, CONTROL, & COMMUNICATIONS - The platoon leader and platoon sergeant,with separate C2 vehicles, operate independently or form a single command OP for sustained operations. They have a motorcycle section of two riders to meet C3 requirements without detracting from the light or heavy scout sections.

Both HMMWVs have a GPS (Global Positioning System) to provide known locations in difficult environments. Other scout vehicles have a simple compass/odometer device to assist in navigation from the known data provided by the GPS.

Both headquarters vehicles mount dual secure, SINCGARS FM radios, with two AN/PRC-126 SURs for the motorcycle section. Each scout vehicle has a secure, SINCGARS FM radio, while each squad has an AN/PRC-126 SUR for dismounted operations.

The PLDR's HMMWV and each of the three CFVs have a AN/PSC-2 Digital Communications Terminal to provide the PLDR and forward observers the ability to interface with the TACFIRE SYSTEM and provide a burst capability for sending messages to the Bn/TF TOC.

The Platoon Sergeant's HMMWV carries a AB-903/G mast antenna for transmission of information over extended distances to the Bn/TF TOC. The platoon also has seven sets of Communications Equipment (CE-11), a switchboard (SB-922), and seven additional field phones (TA-312).

STANO CAPABILITY - The platoon is equipped with twelve pair of binoculars, seven telescopes, 14 pair of AN/PVS-5 NV goggles, and 2 pair of AN/PVS-7B NV goggles. The platoon has four AN/UAS-11 NVD with four AN/GVS-5 Laser Rangefinders, and four AN/PAS-7 NV Devices. The thermal sights of the M3 CFVs are supplemented with three AAWS-M thermal sights and fifteen AN/PVS-4 NV Sights. The platoon has either the latest upgraded M-8 chemical alarms or other NBC detection systems.

MOBILITY - The platoon is equipped with eight HMMWVs, seven M-1026 or M-1043/44 for the PLDR & light scouts and one modified M-1038 for the PSG. The HMMWVs MAY be replaced by M-11 Panhard ULTAV armored car or a similar light armored vehicle in the same class (see Table 4), provided it retains an ease-in-dismounting capability. Both of the motorcycles are in the 250cc range and are muffled as much as practicable. The M3 CFVs are standard concerning their mobility potential.

CONCEALABILITY & STEALTH - The HMMWV and motorcycles provide the platoon with a stealth capability to conduct mounted reconnaissance. The CFVs have been modified to operate quieter (if possible). They each have a 2-3 man dismount team which provides "stealth" in R&S operations. All CFVs and HMMWVs have smoke grenade launchers.

WEAPONS & LETHALITY - The platoon is liberally equipped with light automatic weapons, (e.g. eight SAWs - one per squad and two in the headquarters), to assure its sections/squads the ability to rapidly suppress a threat or break contact, if it is at an immediate disadvantage.

One class above these, the light scout HMMWVs mount the M2 .50 cal heavy machinegun or MK-19 Grenade Machinegun. The 1500+ meter range of these systems allows them to be used in the overwatch role for bounds within the squad. The .50 caliber machinegun employs API-T or SLAP ammunition for self-defense against light armored targets. The 40mm grenade machinegun provides excellent area suppression and can defeat light armored vehicles with HEDP rounds. Neither of these weapons has the ability to consistently and rapidly engage multiple point targets at a distance (e.g. BMPs) and must rely on the heavy scout's CFVs or other tanks, IFVs, ITVs for supporting direct fires.

The 25mm cannon of the CFV is the primary defensive system within the platoon for destroying light armor. It also provides overwatching fires, suppression/extraction fires, or a recon-by-direct fires capability.

Self-defense against heavier armor is provided by the AT-4 in the light section, and a combination of vehicular-mounted and man-portable AAWS-M missiles in the heavy section. The platoon's basic load of these muntions is limited, consistent with the need for immediate self-protection only!

The three forward observers and AN/PSC-2s provide the scouts an effective interface with the TACFIRE system to rapidly call for supporting artillery or mortar fires.

SURVIVABILITY - The HMMWVs of the scouts are kelvar armored. This is the one weakness in the platoon, which could be compensated for by adopting the Panhard M-11 ULTRAV or a similar light armored car. The doctrinal use of the motorcycle scout as a C3 asset will increase his survivability over previous attempts to make him a dedicated front-line scout. The presence of the CFV within the organization recognizes the need to have armor protection on the scout asset which might be more readily called upon to fire its weapons (e.g. "2nd Tier"). Scouts should be equipped with body armor on an as-needed basis.

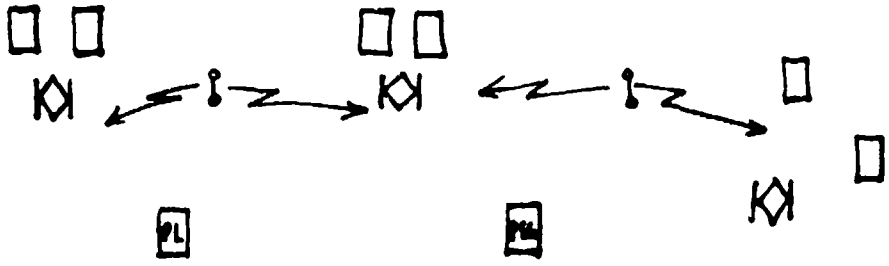
LOGISTICS - This platoon will experience problems in maintaining its STANO equipment, especially the high usage of unique batteries. CLIII problems should be reduced with a common diesel fuel and low usage by the HMMWVs. The continued stress in doctrine NOT TO employ weapons will ease the CL V burden, as will the presence of a single ATGM (AAWS-M). The CFVs provide an internal recovery capability for mired HMMWVs, and the presence of winches in each pair of HMMWVs will further assist. The HMMWV and CFV are common in the vehicle support structure and will NOT create low-density, replacement part demands like the M114 ARCV or M41 light tank did.

ERRATA - This platoon will require 7-8% of the aggregate strength in a tank or mechanized battalion TO&E). Its structure allows for ease of integrating attachments (e.g. GSR or maneuver platoon). It's basis of manning and equipment considered the demands of CONOPS, mission transition, and minimal essential depth of personnel to meet doctrinal requirements at the 60% strength level.

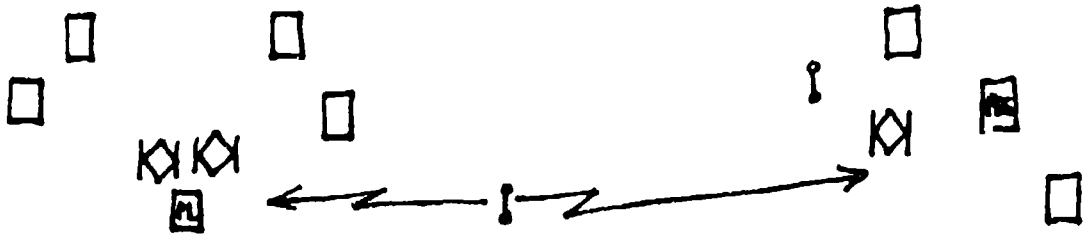
RECONNAISSANCE MISSION NOTIONAL LAYDOWNS

The R&S platoon leader is able to form two or three section teams combining the assets of the light and heavy scout sections as required. Three examples are:

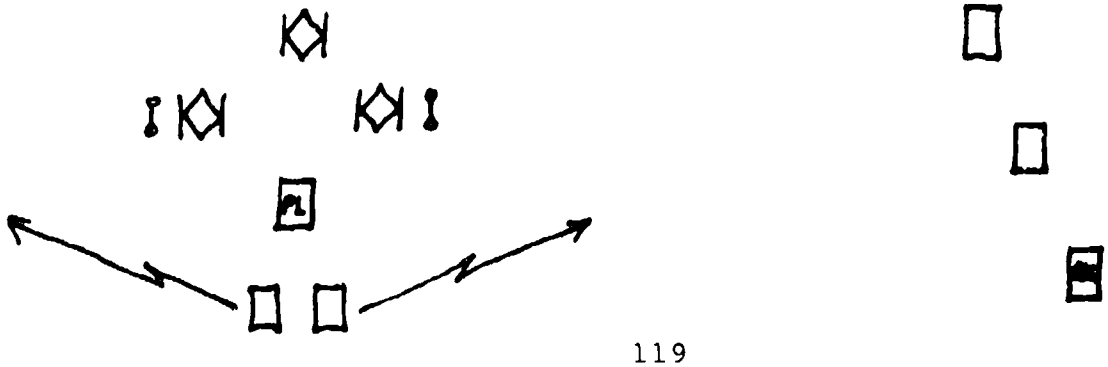
a) If the platoon must recon three routes simultaneously or two routes while maintaining surveillance on a flank, an option is to employ three section/teams of a light and heavy scout squad each.



b) If the platoon must recon a primary (main effort) zone of attack and a secondary route simultaneously, two section/teams may be formed as shown. Light scout squads lead, moving with stealth, supported by the heavy scout squads.



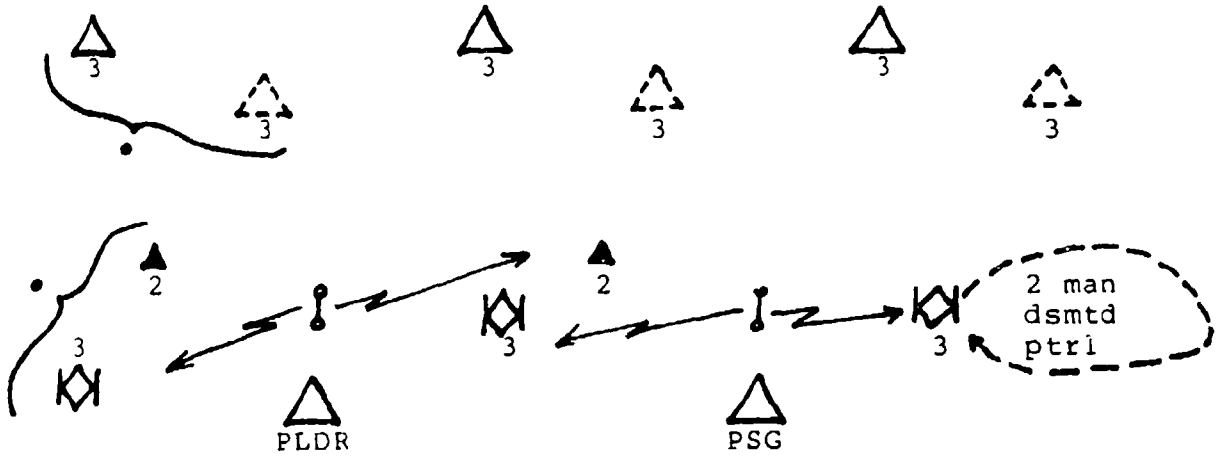
c) If enemy contact is expected in the primary zone of attack, the entire heavy section is used with the light scouts working both recon axis. In the main effort, the light scouts work the laterals and can bypass threat security forces by infiltration.



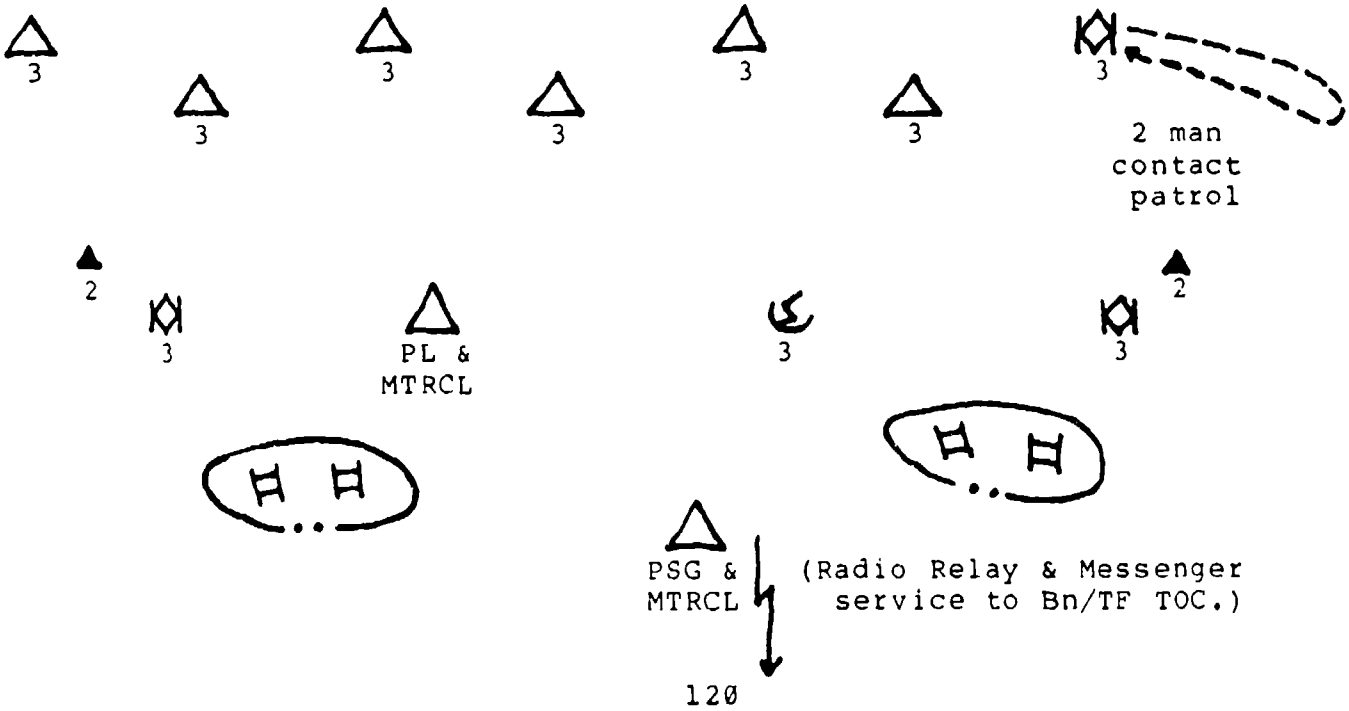
SECURITY MISSION NOTIONAL LAYDOWNS

The R&S Platoon is capable of establishing a surveillance line or a screen line (incls counterreconnaissance). It can accept GSR teams or a tank/mech/ITV platoon in attachment.

a) A notional standard has the light scout section establishing three OPs (long duration) or up to six OPs (short duration) as the forward most element on a screen. The heavy section provides limited dsmtd OPs/patrols in depth and the counterreconnaissance capability of three CFVs, either in ambush positions or as a reaction force.



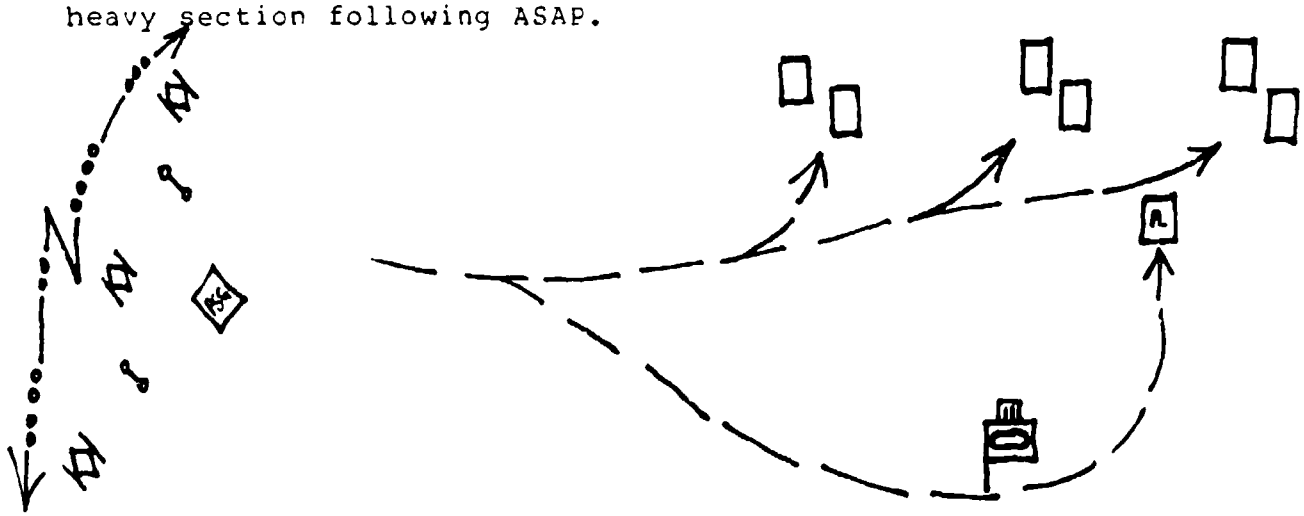
With the attachment of GSRs and a combat maneuver platoon, a maximum effort in terms of frontage and in depth can be obtained.



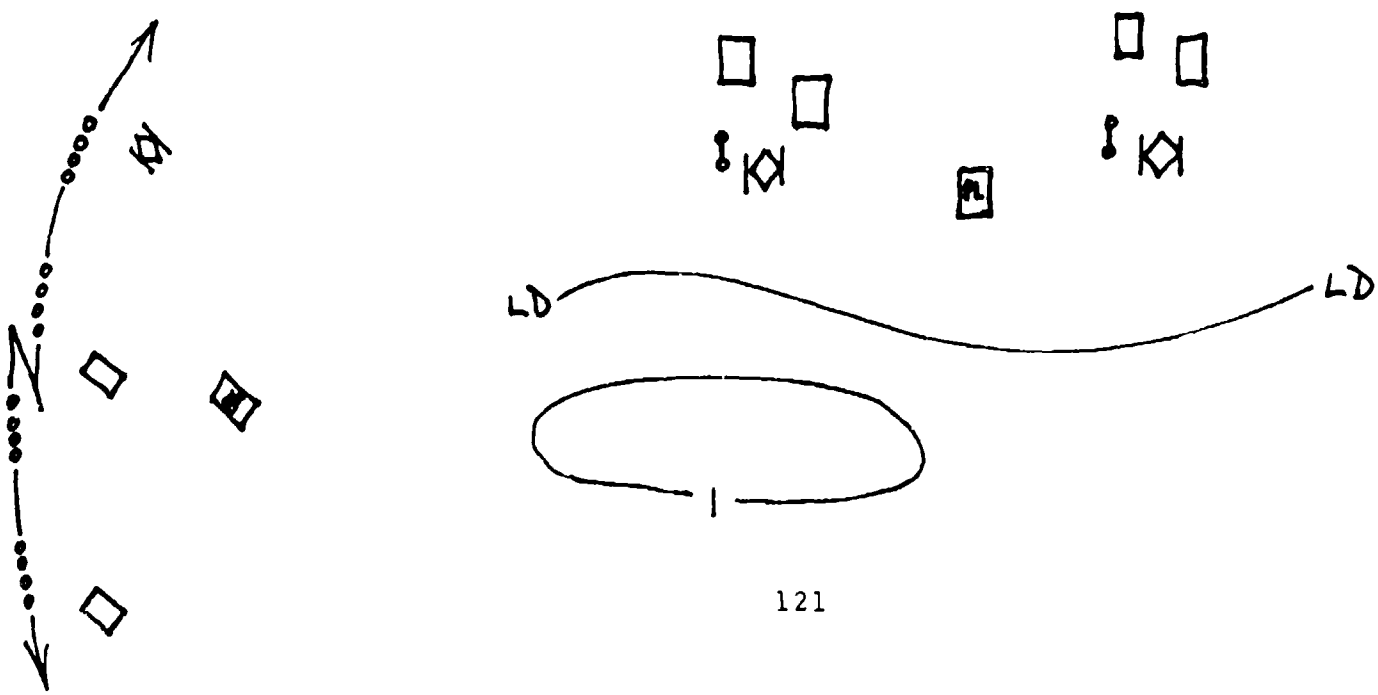
MISSION TRANSITION - NOTIONAL LAYDOWN

The ability to transition rapidly from one set of mission requirements to another is critical. In this example, the R&S platoon is on a screen line when the Bn/TF receives a warning order to conduct an offensive action. A reconnaissance requirement predominates, yet security requirements remain. Transition options include:

a) Maintain a surveillance line with the heavy section under the PSG and supported by the motorcycles. The PLDR and light section move immediately to a forward location while the PLDR receives his recon instructions. Recon is conducted by stealth with the heavy section following ASAP.

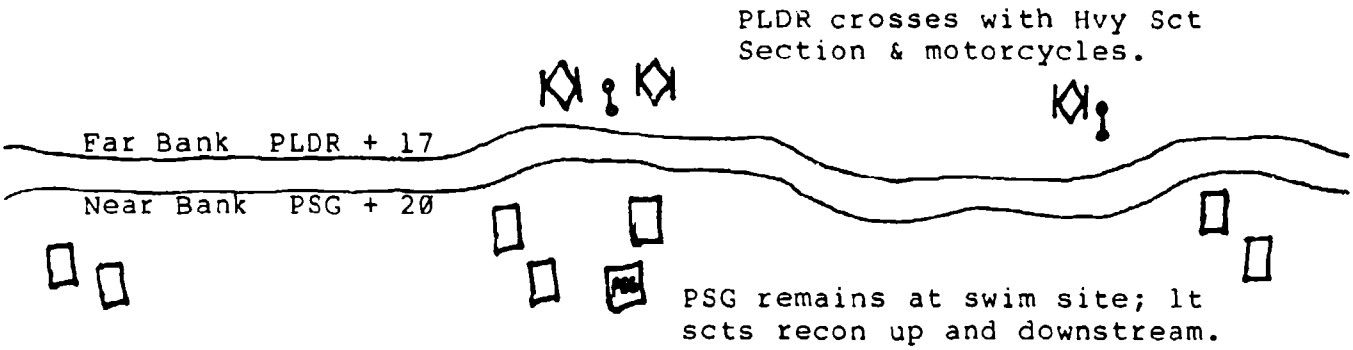


b) Maintain a surveillance line with a light and a heavy scout squad under the PSG. The remainder of the platoon conduct the recon of the zone of attack. Enemy contact is expected so the heavy scouts overwatch.

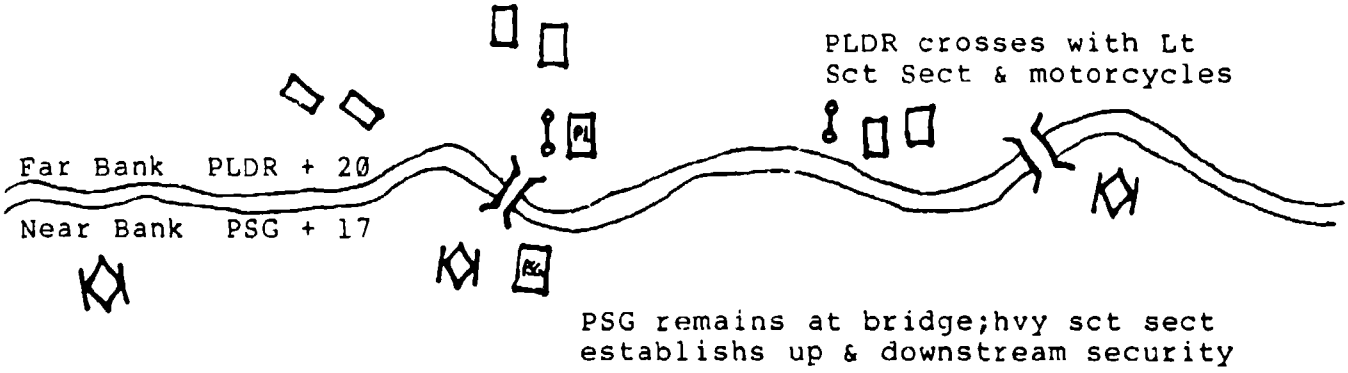


SPECIAL METT SITUATIONS

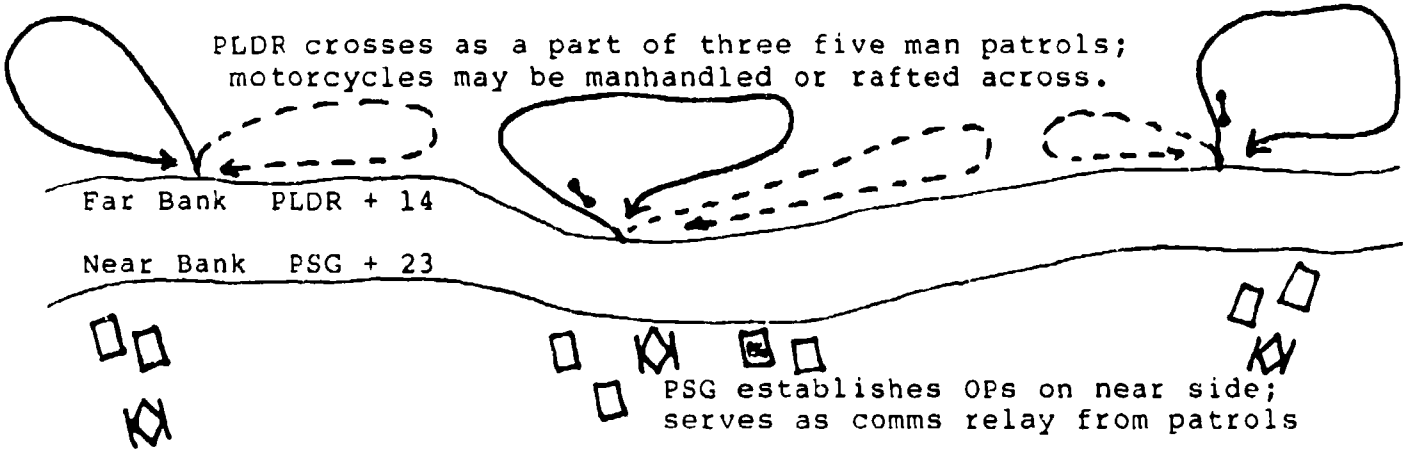
On a zone reconnaissance, the R&S Platoon encounters a stream which cannot be forded, but the CFVs can swim across:



Zone reconnaissance, R&S Platoon encounters a stream where the banks prevent fording or swimming, but a low MLC bridge is avail.



Zone reconnaissance - A stream or dry gap is encountered which cannot be crossed by vehicles. Sufficient dsmtd scouts to patrol far bank while retaining minimum combat crews on all vehicles.



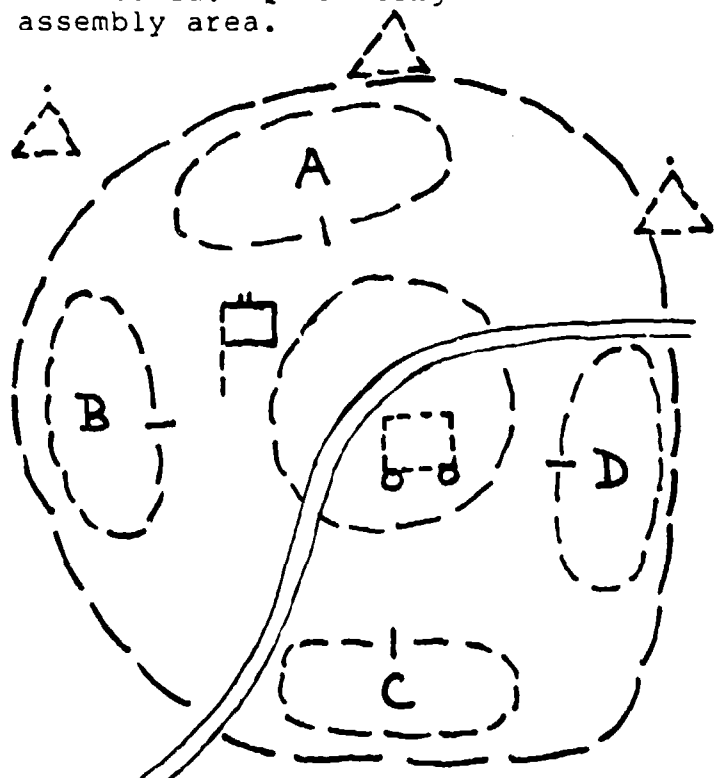
UNIQUE METT SITUATION LAYDOWN

This situation calls for the battalion to make a long road march which requires traffic control/guides as critical points. A new assembly area must be reconnoitered and secured. Quartering party guides are required in the new assembly area.

Four Quartering Party Teams

TM A	TM B	TM C	HQ TM
3x Scts w/HMMWV	3x Scts w/HMMWV	3x Scts w/HMMWV	3x Scts w/HMMWV
5x Scts w/CFV	5x Scts w/CFV	5x Scts w/CFV	PL+Drvr w/HMMWV

Each team checks a Co/Tm assembly area. Lt Scts remain as guides. Hvy Scts rally with PL to check CP & trains areas. PL remains at future TOC site, while hvy scout squads move to OPs.



TCP #5 2x Scts (HMMWV)

TCP #4 2x Scts (Motorcycle)

TCP #3 PSG + Sct (HMMWV)

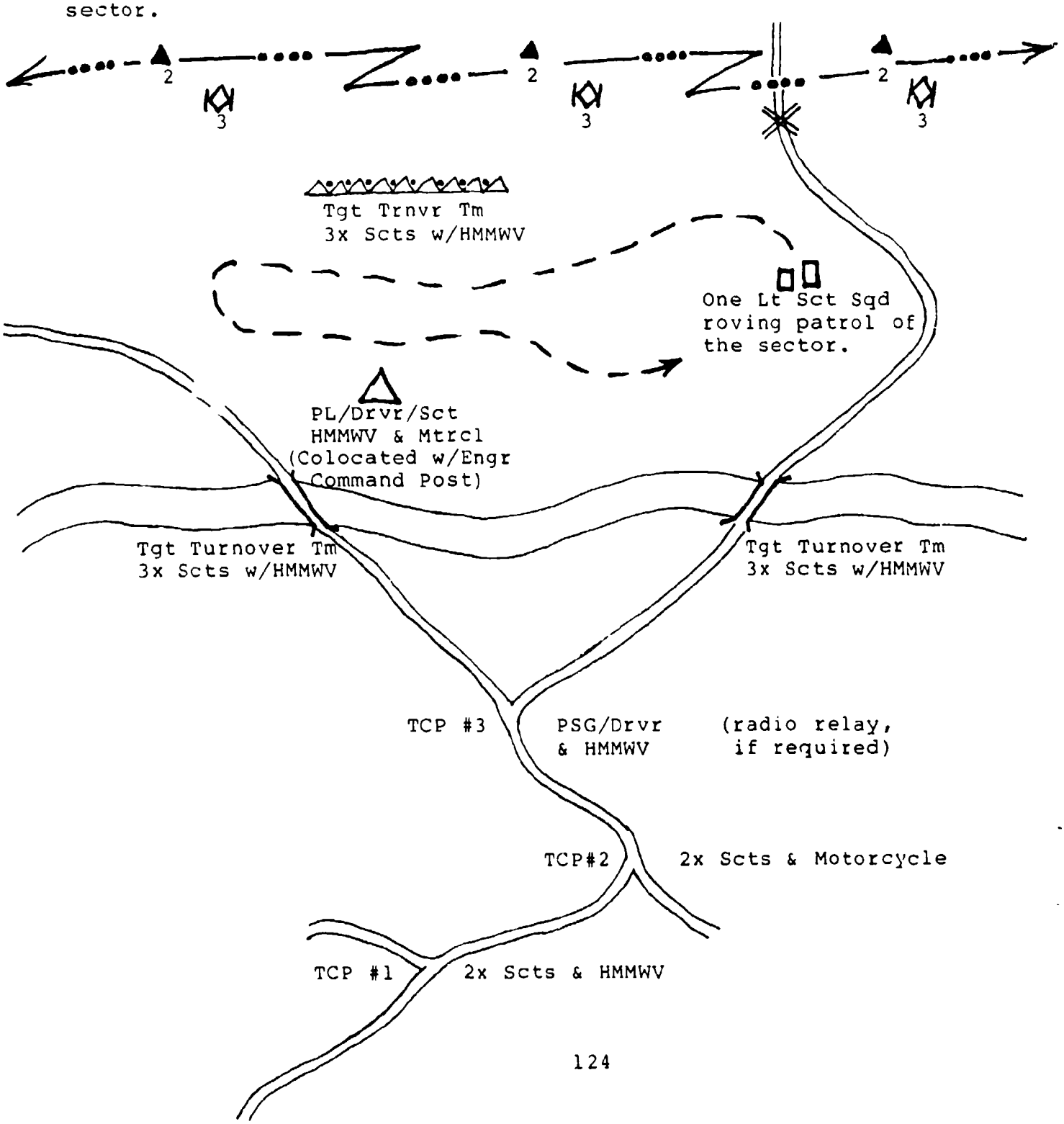
PSG controls the TCPs drawn from one lt sct squad and the two motorcycle scts Each TCP sits has a radio & a vehicle.

TCP #2 2x Scts (Motorcycle)

TCP #1 2x Scts (HMMWV)

UNIQUE METT SITUATION LAYDOWN

Once again, this situation starts with the requirement for the battalion to conduct a long road march (TCPs). The R&S Platoon must be able to assume target turnover from engineers working in the new sector and establish a surveillance line across the Bn/TF sector.



R&S PLATOON SUPPORTING BN/TF COUNTERATTACK FROM RESERVE POSITION

1. Upon recipt of the warning order for the reserve Bn/TF to counterattack, it sends a light scout squad to the southern defending Bn/TF as an LNO to receive an intelligence update from their S-2 and pass any significant situation changes immediately to the commander. Since radio listening silence is in effect, one of the squad's HMMWVs acts as a messenger.

2. The PSG, both motorcycle scouts, and remaining two light scout squads move to the northern defending Bn/TF. The PSG receives a similar update and gathers the latest information on friendly obstacles which the Bn/TF may encounter. He coordinates to move the two light scout squads forward to gather information on the enemy. The motorcycles scouts may be used to return critical information to the Bn/TF TOC since radio silence is in effect on the Bn Cmd net.

3. When directed to do so and as the situation permits, the two light scout squads infiltrate and attempt to gain observation of the axis of advance up to and on the objective.

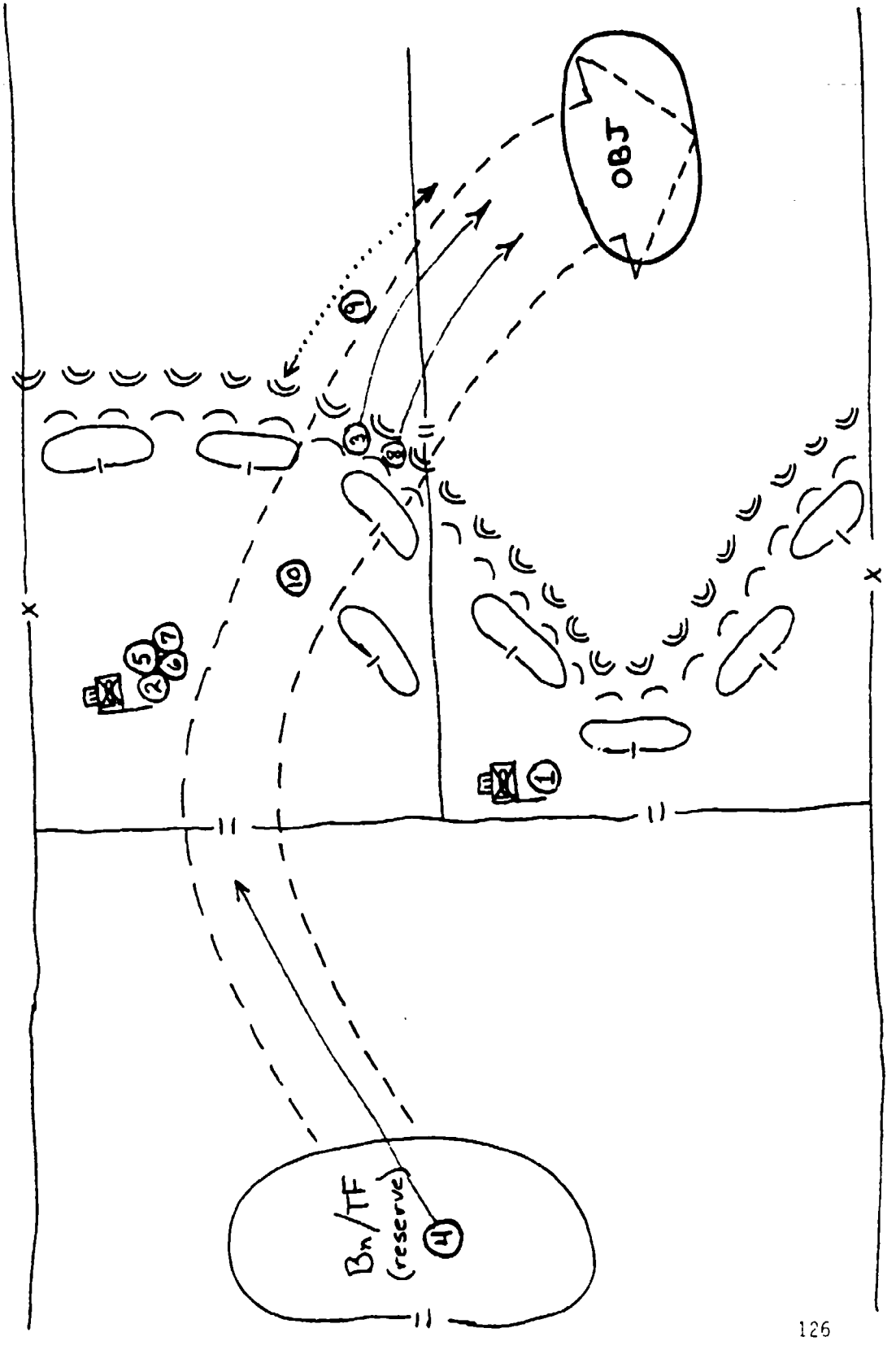
4. The PLDR moved directly to his Bn/TF TOC and participates in the Orders Group for the counterattack. Upon completion, he and the heavy section conduct a hasty route recon of the proposed routes from the Bn/TF reserve position to the LD. They are accompanied by a jump TOC with the TF XO or S-3.

5. The jump TOC personnel brief the defending Bn/TF on the counterattack OPLAN. They request guides along the routes that they will pass on, but the defending force has suffered many casualties and cannot provide enough of them. The motorcycle scouts of the R&S Platoon are tasked to assist as guides.

6. The PLDR links up with the PSG and briefs him on the OPLAN. The PSG and the heavy section will establish a surveillance line on the left flank of the Bn/TF when it crosses the LD. There is insufficient force for a screen with its inclusive counterreconnaissance tasks, but early warning from OPs is possible.

7. The PLDR, knowning that the Bn/TF will commence its movement soon, recalls the light scout squad from the southern Bn/TF (using his FM net) to rendezvous with him. He establishes contact with the other two light scout squads, determines their situation, and receives any information. He provides it to the XO or S-3 in the jump TOC. As the NCS, they may break listening silence on the Bn/TF Command Net, if required, to pass it to the Bn/TF Cdr.

CON'T


OBJ
Bn/TF
(reserve)
EX
EX

8. The PLDR is joined by the remaining light scout squad. Together they move forward and also attempt to infiltrate to gain observation of the final objective. The PLDR ensures that the jump TOC has the location of his infiltrated scouts prior to the Bn/TF lead elements crossing the LD. This will lessen the possiblity of fratricide from direct and indirect fires.

9. As the first company/teams cross the LD, the PSG and the heavy scout section begin moving to establish their surveillance line on the left flank of the battalion.

10. When the motorcycle scouts are no longer needed as guides, they move to join the PSG and assist him as required on the surveillance line.

SECTION V

TABLE 1 RECONNAISSANCE & SCOUT PLATOONS

PERIOD	TO&E	# PERS/VEHS		PARENT BN	MANUALS		NOTES
WWII 1942	T/O&E 17-16 1x Halftrack (C2) 4x Jeeps 2x Motorcycles	1+21	7	HHSC 3x Med Tank Co	FM 17-20 FM 17-33	May 44 Sep 42	Armd Div (6x3)
WWII 1944	T/O&E 17-26 1x Halftrack (C2) 5x Jeeps	1+20	6	HHC 3x Med Tank Co 1x Lt Tank Co Asslt Gun & Mortar Platoons	FM 17-33 FM 17-42	Dec 44 Nov 44	Armd Div (3x3)
POST WWII & KOREA	TO&E 17-25N Apr 48 1x Jeep (C2) 4x Jeeps (2x MGs & 2x RLs) 2x M24 Lt Tanks . . . . . . 1x M75 APC (10 Inf) . . . . . . 2x Jeeps (81mm Mort).	1+38	10	HHSC 4x Med Tank Co 1x Medic Det	FM 17-33 FM 17-22 FM 17-80	Sep 49 May 50 Jan 56	Armd Div (3+1x4) Later M41 Walker Bulldog. Later the M59 APC. Later a halftrack mtd mortar.
EARLY PENTOMIC	TO&E 17-25T Dec 56 2x Jeeps (C2) 12x Jeeps w/MGs (6x RLs)	1+39	14	HHC 4x Med Tank Co	FM 17-33	Aug 57	Armd Div (4x4)
LATE PENTOMIC	TO&E 17-25D May 60 2x Jeeps (C2) 12x Jeeps w/MGs (6x RLs) 1x 3/4 Ton Truck w/GSR	1+42	15	HHC 4x Med Tank Co	FM 17-35	Feb 60	Armd Div (4x4)
ROAD	TO&E 17-35E Jul 63 1x M114 (C2) 4x M114 2x M41A1 1x M113 (11 Inf)	1+32	8	HHC 3x Med Tank Co	Only Changes to FMs		Armd Div (6x5)
G-SERIES	TO&E 17-35G Mar 66 1x M114 (C2) 1x M113 (C2) 8x M114	1+30	10	HHC 3x Med Tank Co	FM 17-15 FM 17-36 FM 17-36	Mar 66 Oct 65 Nov 68	Armd Div (6x5)
VIETNAM	MTO&E 17-35G 1967 10x M113 ACAVs	1+49	10	HHC 3x Med Tank Co	USARPAC MTO&E		Used in the three tank and nine mech infantry battalions assigned to fight in Vietnam.

PERIOD	TO&E	# PERS/VEHS		PARENT BN	MANUALS	NOTES
EARLY H-SERIES	TO&E 17-35H Nov 70 1x M114A1 (C2) 1x M113A1 (C2) 8x M114A1	1+29	10	HHC 3x Tank Co Cbt Spt Co	C2 FM 17-15 Aug 72 FM 17-36 Jun 73	Armd Div (6x5)
LATE H-SERIES	TO&E 17-35H (C11) 2x M113A1 (C2) 4x M113A1 (Dragon) 4x M220 (TOW)	1+29	10	HHC 3x Tank Co Cbt Spt Co	FM 71-2 Jun 77 FM 17-95 Jul 77	Armd Div (6x5)
DRS	Option 1 - None at Bn/TF.	0	0			Armd Div (9x6)
	Bde Sct Platoon: 2x Motorcycles 5x M113A1	1+16	7			
	Option 2 - Bn/TF 3x Motorcycles 3x M151 Jeep	1+8	6			
	Option 3 - Bn/TF 3x Motorcycles 3x M901 ITVs	1+11	6			
CONCEPTUAL Scout Plt	TO&E 17-35H(C16) 4x M113 ACCVs 3x M901 ITVs	1+29	7	HHC 4x Tank Co		Armd Div (6x4)
DIV 86 TRANSITION	TO&E 17235J42G 3x M113 APCs 3x M901 ITVs	1+29	6	HHC 4x Tank Co	FM 71-2J (Draft) FM 17-98 Nov 85	Armd Div (6x4)
AOE	TO&E 17375L000 6x M3 CFVs	1+29	6	HHC 4x Tank Co	FM 17-98 Oct 87 FM 71-2 Sep 88	Armd Div (6x4)
R&S PLT	2x HMMWV (C2) 2x Motorcycles (C2) 6x HMMWVs 3x M3 CFVs	1+38	13	HHC 4x Tank Co		

TABLE 2 RECON & SCOUT vs CAVALRY PLATOONS

PERIOD	MANEUVER BATTALION	REGT/BDE LEVEL	DIVISION LEVEL	CORPS LEVEL
WWII 1942	Reconnaissance Platoon 1x Halftrack (C2) 4x Jeeps 2x Motorcycles 22x Soldiers	Armor Regt had a rcn plt like div & corps. Inf Regt had a dsmtd I&R Plt.	Div Rcn Plt 4x Armd Cars 4x Jeeps 1x Assault Gun 42x Soldiers	Corps Rcn Plt 4x Armd Cars 4x Jeeps 1x Assault Gun 42x Soldiers
WWII 1944	Reconnaissance Platoon 1x Halftrack (C2) 5x Jeeps 21x Soldiers	Combat Cmd used divsl rcn assets. Inf Regt kept its dsmtd I&R Plt.	Div Rcn Plt 7x Jeeps 3x M8 Armd Cars 1x Halftrack 36x Soldiers (?)	Corps Rcn Plt 7x Jeeps 3x M8 Armd Cars 1x Halftrack 36x Soldiers (?)
POST WWII & KOREA	Reconnaissance Platoon 1x Jeep (C2) 4x Jeeps (2x MGs & 2x RLs 2x M24 Lt Tanks . . . . . . 1x M75 APC (10 Inf) . . . . . . 2x Jeeps (81mm Mort). . . . . . 39x Soldiers	No change from above.	Div recon plts exactly like bn recon plt model.	Corps recon plts exactly like bn recon plt model. Later M41 Walker Bulldog. Later the M59 APC. Later a halftrack mtd mortar.
EARLY PENTOMIC	Scout Platoon 2x Jeeps (C2) 12x Jeeps w/MGs (6x RLs) 40 Soldiers	Cbt Cmd gains sct sect (4x Jeeps) Btl Grp gains rcn plt = divsl model.	Div Rcn Plt 5x Jeeps 2x M41 Lt Tanks 1x M59 APC 1x M84 4.2" Mortar 39x Soldiers	Corps recon plt 5x Jeeps 2x M48 Med Tanks 1x M59 APC 1x M84 4.2" Mortar 39x Soldiers
LATE PENTOMIC	Scout Platoon 2x Jeeps (C2) 12x Jeeps w/MGs (6x RLs) 1x 3/4 Ton Trk w/GSR 43x Soldiers	Same as above.	Same as above.	Same as above.

ROAD	Reconnaissance Platoon 1x M114 (C2) 4x M114 ACRVs 2x M41A1 Lt Tanks 1x M113 APC (11 Inf) 33x Soldiers	Cbt Cmd & Btl Gps become brigades. Bde sct sect of 4x M114s with 12x Soldiers.	Divsl Armd Cav Plt 1x M114 (C2) 4x M114 ACRVs 2x M41A1 Lt Tanks 1x M113 APC (11 Inf) 1x M84 4.2" Mortar 38x Soldiers	Regmtl Armd Cav Plt 1x M114 (C2) 4x M114 ACRVs 3x M41A1 Lt Tanks 1x M113 APC (11 Inf) 1x M84 4.2" Mortar 42x Soldiers
G-SERIES	Scout Platoon 1x M114 (C2) 1x M113 (C2) 8x M114 ACRVs 31x Soldiers	Brigade losses its sct sect.	Divsl Armd Cav Plt 1x M114 (C2) 4x M114 ACRVs 3x M551 AR/AAVs 1x M113 APC(11 Inf) 1x M106 4.2" Mortar 42x Soldiers	Regmtl Armd Cav Plt 1x M114 (C2) 4x M114 ACRVs 3x M551 AR/AAVs (or M48s) 1x M113 APC (11 Inf) 1x M106 4.2" Mortar 42x Soldiers
VIETNAM	Scout Platoon 10x M113 ACAVs 50 Soldiers	No change.	Divsl Armd Cav Plt 6x M113 ACAVs 3x M551 AR/AAVs 1x M106 4.2" Mortar 48x Soldiers	Regmtl Armd Cav Plt 6x M113 ACAVs 3x M48 Tanks 1x M106 4.2" Mortar 48x Soldiers
EARLY H-SERIES	Scout Platoon 1x M114A1 (C2) 1x M113A1 (C2) 8x M114A1 30x Soldiers	No change.	Divsl Armd Cav Plt 5x M114A1 ACRVs 3x M551 AR/AAVs 1x M113 APC (11 Inf) 42x Soldiers	Regmtl Armd Cav Plt 5x M114A1 ACRVs 3x M551 AR/AAVs 1x M113 APC (11 Inf) 42x Soldiers
LATE H-SERIES	Scout Platoon 2x M113A1 (C2) 4x M113A1 (Dragon) 4x M113A1/TOW 30x Soldiers	No change.	Divsl Armd Cav Plt 3x M113 2x M113/TOW (later M901) 4x M60A1 (later M60A3) 40x Soldiers	Regmtl Armd Cav Plt (USAREUR) 6x M551 AR/AAVs 2x M113 1x M106 4.2" Mortar 40x Soldiers

DRS	Option 1 - None at Bn/TF; Option 2 - Bn/TF Sct Plt 3x Motorcycles 3x M151 Jeep 9x Soldiers Option 3 - Bn/TF Sct Plt 3x Motorcycles 3x M901 ITVs 12x Soldiers	Bde Scout Plt 2x Motorcycles 5x M113A1 19x Soldiers		
CONCEPTUAL SCOUT PLT	Scout Platoon 4x M113 ACCVs 3x M901 ITVs 30x Soldiers	Unknown.		
DIV 86 TRANSITION	Scout Platoon 3x M113 APCs 3x M901 ITVs 30x Soldiers	Bde Scout Plt 6x CFVs 30x Soldiers (planned; never fielded)	Scout Plt, Divsl Cav Troop 6x M3 CFVs 30x Soldiers	Scout Plt, Regmtl Cav Troop 6x M3 CFVs 30x Soldiers
AOE	Scout Platoon 6x M3 CFVs 30x Soldiers	No bde scouts. (AOE billpayer)	Scout Plt, Divsl Cav Troop 6x M3 CFVs 30x Soldiers	Scout Plt, Regmtl Cav Troop 6x M3 CFVs 30x Soldiers
R&S PLT	Recon & Surv Plt 2x HMMWV (C2) 2x Motorcycles (C2) 6x HMMWVs (Lt Scouts) 3x M3 CFVs (Hvy Scouts) 39x Soldiers (42 in wartime)		Divsl Cav Plt Mix of HMMWVs and M3CFVs - TBD o/a 40 Soldiers	Scout Plt, Regmtl Cav Troop Same as above.

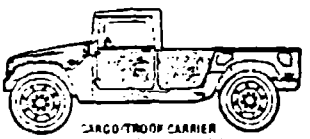
TABLE 3 LIGHT SCOUT VEHICLE CONTENDERS

DATA ITEMS	M998 HMMWV	FR PANHARD ULTRAV M11	ISRAELI RBY	WEST GERMAN WIESEL	CADILLAC-GAGE CMDO-SCOUT
CREW	3 or 4	3	2+6	2 or 3	3
RANGE	500 kms	530 kms	750 kms	200 kms	800(+) kms
ENGINE	V-8 Diesel	Diesel	V-6 Gas	5cy Diesel	V-6 Diesel
FUEL CAP.	24.5 gal	Unknown	140 liters	80 liters	378 liters
WADE CAP.	30"/60"w/kit	.9 meters	.75 meters	Unknown	1.17 meters
AMPHIBIOUS	no	yes	no	yes w/kit	no
DRIVE TYPE	Whld 4x4	Whld 4x4	Whld 4x4	Tracked	Whld 4x4
SIZE (LxW)	4.7 x 2.1 m	3.7 x 2 m	5 x 2 m	3.2 x 1.8 m	4.7 x 2.1 m
HEIGHT	1.8 meters	1.7 meters	1.6 meters	2 meters	2.2 meters
SPEED	88 kmph	99.5 kmph	100 kmph	80 kmph	96 kmph
CLEARANCE	16"	.37m	.27m	.30m	Unknown
WEIGHT	3600 kg	3600 kg	3600 kg	2900 kg	7258 kg
ARMOR	semi-open kelvar only	enclosed 5-11mm	open top 8-10mm	open top def 7.62mm	enclosed def 7.62mmAP
NBC DEF.	none	optional	none	none	none
ARMAMENT OPTIONS (turret)	M60 MG MK-19 GMG M2 HMG TOW/AAWS-M	M60 MG MK-19 GMG M2 HMG AAWS-M	M60 MG MK-19 GMG M2 HMG TOW/AAWS-M	(20mm) TOW/AAWS-M (M2/M240)	(MK-19/M240) (M2/M240) M60 MG TOW/AAWS-M MK-19
VERT OBST	Unk	Unk	Unk	.4m	.6m
TRENCH	none	none	none	1.2m	none

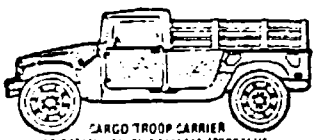
CARGO/TROOP CARRIERS

CARGO/TROOP CARRIER

CARGO/TROOP CARRIER


CARGO/TROOP CARRIER

CARGO/TROOP CARRIER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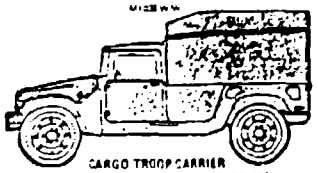
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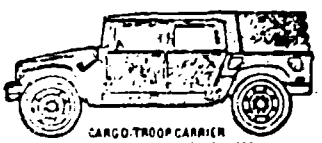
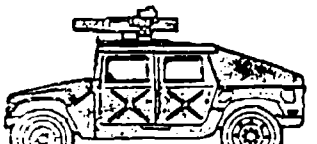
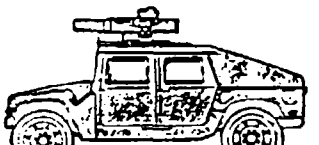
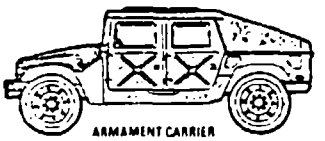

CARGO/TROOP CARRIER

ARMAMENT CARRIERS

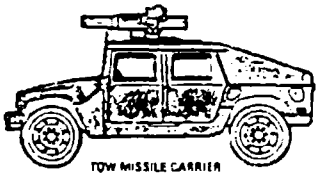

TOW MISSILE CARRIER
BASIC ARMOR

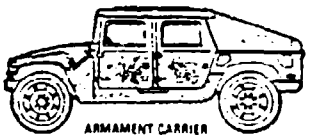

TOW MISSILE CARRIER
SUPPLEMENTAL ARMOR

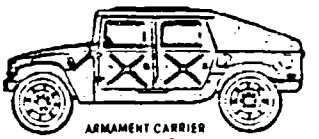
ARMAMENT CARRIER
SUPPLEMENTAL ARMOR


ARMAMENT CARRIER
BASIC ARMOR

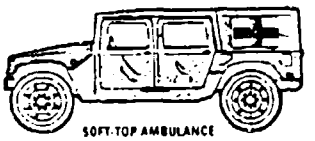
TOW MISSILE CARRIER
BASIC ARMOR


TOW MISSILE CARRIER
SUPPLEMENTAL ARMOR

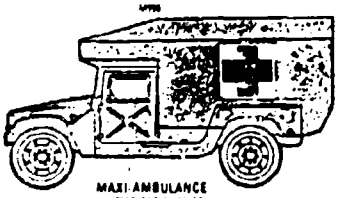

ARMAMENT CARRIER
SUPPLEMENTAL ARMOR


ARMAMENT CARRIER
BASIC ARMOR

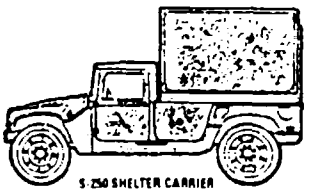
AMBULANCES

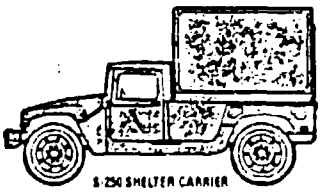

SOFT-TOP AMBULANCE
FLUTTER

MINI-AMBULANCE
FLUTTER BASIC ARMOR


MAXI-AMBULANCE
FLUTTER BASIC ARMOR

SHELTER CARRIERS


S-250 SHELTER CARRIER


S-250 SHELTER CARRIER

SYSTEM ENHANCEMENTS

★ REQUIRED
● AVAILABLE

CARGO/TROOP CARRIER	●	●	●	●	●	●	●	●	●	●	●	●	●					
ARMAMENT/TOW CARRIER	●	●						●		●	●	●		★	●	●	●	
S-250 SHELTER CARRIER	●	●	●					●		●	★	●						
MAXI AMBULANCE	●	●						●		●		★		★				
MINI AMBULANCE	●	●						●		●		★		★				

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